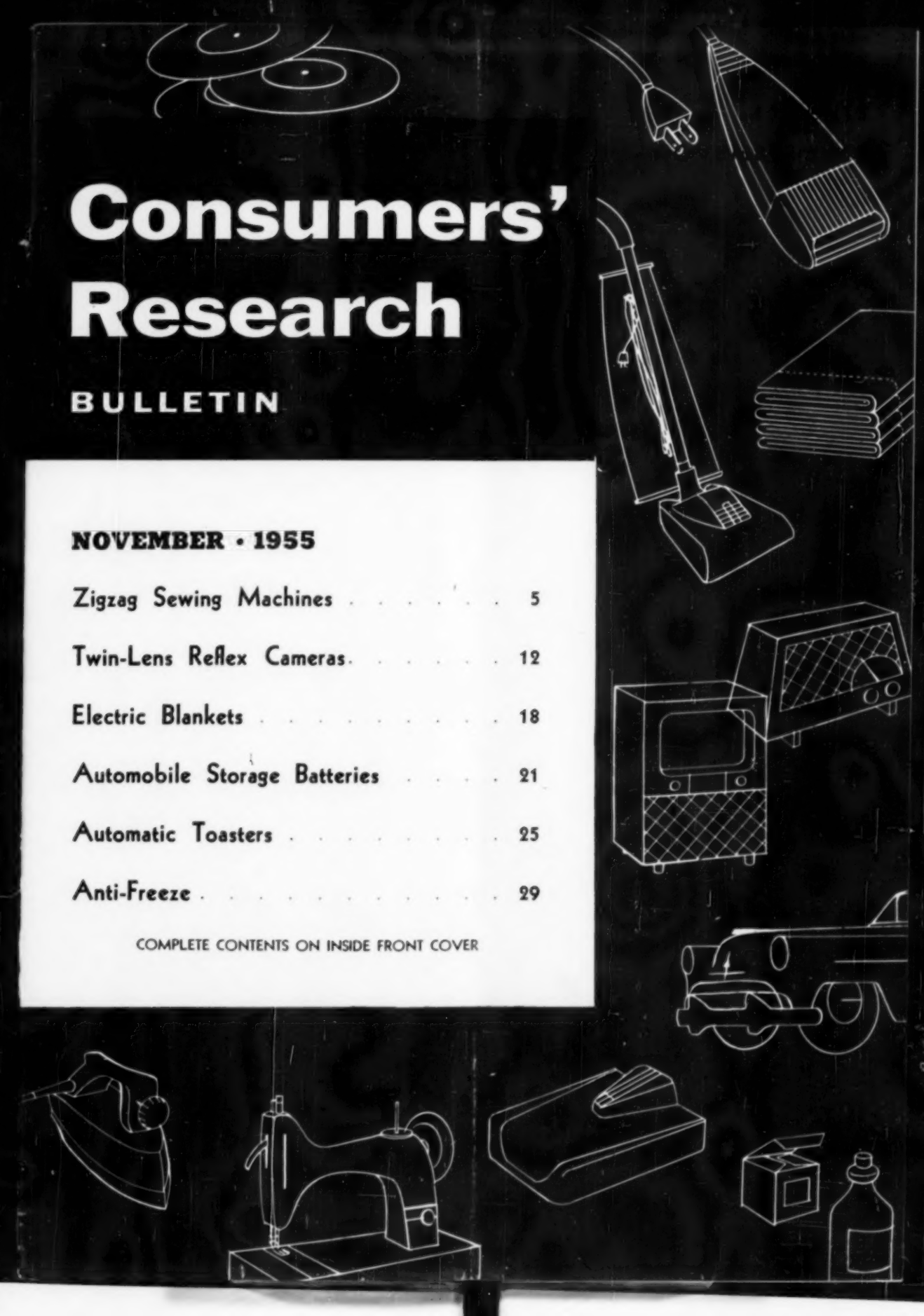
Consumers' Research

BULLETIN



NOVEMBER • 1955

COMPLETE CONTENTS ON INSIDE FRONT COVER

Consumers' Research Bulletin

NOVEMBER 1955 VOL. 36 • NO. 5

CONTENTS

Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances, and publishes the findings in CR BULLETIN. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization.

OFF THE EDITOR'S CHEST

MAIL-ORDER BUYING is a great convenience for those who live in rural or suburban areas where there is no cheap and convenient public transportation system. The man of the house usually drives the family car to work, and the homemaker must wait to do her shopping at weekends or rely on a friend to take her to town and back.

There is a wide variety of merchandise that may be bought by mail. Of course, everyone knows about the catalogs from Montgomery Ward and Sears Roebuck which give detailed descriptions of the merchandise and offer ample stocks, particularly in clothing, in a good range of sizes and colors. If the purchase fails to please, it may be returned and a refund will be sent without question.

Gone are the days when you can distinguish the farmer's daughter from a city girl. The styles offered by the mail-order houses are as fashionable and up-to-date as anything found in Fifth Avenue shops at comparable prices.

In addition to the "big two," there are a number of smaller mail-order firms that specialize in particular fields. L. L. Bean of Freeport, Maine, is well known for his sporting goods, camping supplies, and sportswear. Von Lengerke & Antoine (9 N. Wabash, Chicago 2), Hammacher Schlemmer (145 E. 57 St., New York City), and Lewis & Conger (45 and Avenue of the Americas, New York City) sell all kinds of household supplies and gadgets. Abercrombie & Fitch (45 and Madison Ave., New York City) are famous for sportsmen's articles, and utensils and equipment for meals out of doors.

S. S. Pierce (133 Brookline Ave., Boston) sells its own line of certain grocery items by mail. There is a long list of mail-order firms which sell sea food, hams and bacon, cheese, maple syrup, fruits, cookies, jams and jellies, and other food specialties. Some turn out very good products, others are distinguished chiefly for their effective advertising. It is a little diffi-

(*Continued on page 17*)

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• • CONSUMERS' RESEARCH BULLETIN is on file in many school, college, and public libraries and is indexed in Industrial Arts Index and in the Readers' Guide to Periodical Literature. • • Printed in U.S.A. • • *Microfilm copies* of complete volumes of CONSUMERS' RESEARCH BULLETIN can be purchased by regular subscribers to CONSUMERS' RESEARCH BULLETIN at $1.50 per volume (beginning 1949), from University Microfilms, 313 North First St., Ann Arbor, Mich.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. ¶This rule, however, regarding long advance notice does not apply to military personnel. *CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.*

Symbols used to indicate sources of data and bases of ratings: **AA**—regarded as worthy of highest recommendation; **A**—recommended on basis of quality; **B**—intermediate with respect to quality; **C**—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; **1,2,3**—relative prices, **1** being low, **3** high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price;** 54.55—year in which test was made or information obtained or organized by the staff of Consumers' Research.

The Consumers' Observation Post

NEW AUTOMOBILES FOR 1956 are expected to be much the same as 1955. The big changes in appearance will wait until 1957, according to The Wall Street Journal. The chief exceptions are the Lincoln, the Rambler, and the Studebaker. Substantial changes are being made in the Lincoln in order to compete better with Cadillac; the Rambler is slated to be bigger; the new Studebaker will be larger and will have a bulkier look.

* * *

IN THE TOOTHPASTE FIELD, the emphasis in advertising is on anti-enzymes such as "Gardol" in Colgate and "Irium" in Pepsodent, as well as "Antizyme" in Listerine. Reports from dentists and physicians noted by a dentist writing in the Armed Forces Medical Journal indicate that they are encountering new oral lesions since the use of toothpastes with anti-enzymes has become general. The irritation to the sensitive tissues of the mouth and gums sometimes appears only after a shift from one brand to another. Some users are unable to tolerate any type of anti-enzyme dentifrice.

* * *

BORIC ACID has been the cause of a number of cases of boric acid poisoning in infants, some of them fatal, when it has been improperly applied. Although the Food and Drug Administration has taken the position that 5 percent borated talc is safe, there is still some disposition to question the desirability of using borated talc on injured or abraded skin of an infant. The chief reason for eliminating boric acid as a constituent of baby powder is its generally accepted lack of bactericidal and bacteriostatic activity. There seems to be no practical antiseptic effect of 5 percent borated talc in treating diaper rash, according to two competent physicians.

* * *

HOUSES WITHOUT STEPS are recommended by the National Society for Crippled Children and Adults as effective dwellings in which the handicapped can live an easier, safer life. Science News Letter points out that there are more than 23,000,000 physically handicapped persons in the United States, and there would be a demand for houses where all floors are flush with the ground outside, with easy access even without a ramp. Wider doorways and hallways, swinging doors or no doors at all, larger bathrooms, and windows which are operated by a crank are all features that are advocated for the "wheelchair house."

* * *

FROZEN FOODS can now be shipped without refrigeration. The new method, called "Super Chill," is being tried out by Libby, McNeill & Libby in shipments of fruit and vegetables from the Midwest to South America. The technique involves bringing packages of frozen food to a temperature of 150° below zero by using liquified nitrogen and sealing them in 6-foot aluminum cubes. According to a Libby, McNeill & Libby executive quoted in The Wall Street Journal, frozen spinach shipped from Chicago to Toledo, Ohio, ordinarily warms up from zero to 18° above, even in the best refrigerator car, and there is no way of preventing some quality deterioration at that temperature. The new method is designed to eliminate this difficulty.

* * *

THE TREND TO BATHROOM DECORATION is given credit for an increase in sales of toilet seats. Retailing Daily reports that plain colors in wood are in considerable demand in many areas. In Wichita, Kansas, the magazine discovered that consumers have passed up plastics in favor of the more durable wood. In Houston, Texas, on the other hand, plastic seats outsell

the wooden type in some stores by a ratio of 3 to 1, because they are considered more decorative. Prices for seats are around $4 for wooden ones, running up to $30 for a handpainted luxury item.

* * *

FUR TYPE FABRICS of blended Orlon-dynel are being advertised extensively this fall. There are also developments under way in the mills to produce these fabrics in 100 percent Orlon, Orlon and wool, Orlon and nylon, and possibly other blends. Only time and experience will tell how well they wear, but manufacturers have warned that coats can be damaged and even ruined by improper cleaning. Fur cleaning methods which are recommended by some manufacturers are reported to be satisfactory mainly when the coat is only lightly soiled. If the collar and sleeve cuffs become matted in wear, it is difficult, if not impossible, to restore the pile to its original softness and texture, according to Modern Textiles magazine.

* * *

THAT SIESTA AT MIDDAY which is traditionally a custom in the tropics is based on a sound principle. Dr. Clarence A. Mills of the University of Cincinnati suggests that a brief afternoon nap is an effective measure to favor long life. If it isn't possible to take a siesta at noon, he suggests a 10-minute nap before the evening meal.

* * *

MORE CUPS OF COFFEE per ounce are made from soluble coffee when the pot rather than the cup method is used. The difference, however, is not great, for the study conducted by the National Family Opinion, Inc., found 15.5 cups was the score for the pot method; 14.7 when coffee was made in the cup. It also appears that about 17 percent of the 4500 families studied use soluble coffee, 43 percent use regular coffee, and 40 percent use both. While the flavor of the beverage made with soluble coffee is not considered to be the equal of that which is made from fresh roasted coffee, it compares favorably with regular coffee customarily available to most consumers, including those who use the vacuum packed type.

* * *

WARNINGS OF THE DANGERS from increased use of radioactive materials, including X-ray in diagnosis, are appearing with greater frequency these days. Dr. Israel E. Kirsh, Hines, Ill., has recently presented an impressive study in the Journal of the American Medical Association on the harm that may result from small doses of radiation as used in fluoroscopy and radiographs made for diagnosis. After presenting a number of tables showing the amount of radiation received with use of specific equipment, Dr. Kirsh pointed out that physicians must remember that genetic effects resulting from X-ray diagnostic procedures will not be visible during the physician's lifetime, and the sufferers will be the descendants of his patients. He urged that when a non-malignant disease is present the examining physician seriously consider whether some other therapy besides X-rays or radioactive substance would serve. He also suggested that radiologists and other physicians should give some thought to the danger to a patient from too many radiographic examinations used for diagnosis.

* * *

WATCH FOR A NEW FABRIC containing reflective yarn that will make an appearance this fall. The yarn is a product of the Minnesota Mining & Manufacturing Company, that also turns out the self-adhesive tape to be affixed to auto bumpers to reflect another car's headlights. The new yarn is designed to provide greater safety for pedestrians.

* * *

SMALL AMOUNTS OF PENICILLIN are being found in milk. Apparently it is due to use of the antibiotic in treating cows, but the Food and Drug Administration is reported to be looking into the possibility that penicillin may have been added to the milk to prevent the growth of bacteria. The

(The continuation of this section is on page 33)

Zigzag Sewing Machines

SEWING MACHINES have been fixtures in households for many years, and for a long time there were no basic changes in their design or performance. Sewing machines made a straight seam faster than it could be done by hand. Some did it better and more smoothly than others, but that was the essential difference.

Then a few years ago a number of enterprising European manufacturers began marketing in this country so-called "zigzag" sewing machines. These machines not only made the straight basic sewing stitch but also made a side-to-side "zigzag" decorative stitch similar to that which women made by hand for overcasting seams.

These were not the first sewing machines of this kind that were made. They had been used in industry and in homes abroad for a good many years. When CR last tested sewing machines in 1952, however, only a few zigzag machines were on the market in the United States.

The new automatic machines sell at $275 and up, which is about $100 more than good straight sewing machines, though some console-model straight sewing machines sell for as much or more. Manually controlled zigzag sewing machines sell at about the price charged for the higher-priced straight sewing machines, sometimes even less. The least expensive zigzag machine is a non-automatic manually controlled machine selling at $170; the most expensive automatic machines sell at $340, a difference of $170. Prices differ, of course, depending on the kind of cabinet or console supplied. Optional accessories and additional cams for some machines may increase the price still more.

Women were delighted with zigzag machines from the first. On the new machines it was possible, without the use of attachments, to do many different kinds of sewing and decorative stitching which otherwise would be done by hand or with separate mechanical attachments on a straight-stitch sewing machine. Common home sewing jobs that can be done by zigzag machines are overcasting seams, hemming, and seaming and making zigzag seams for jerseys, silks, and soft rayons.

How easy is it?

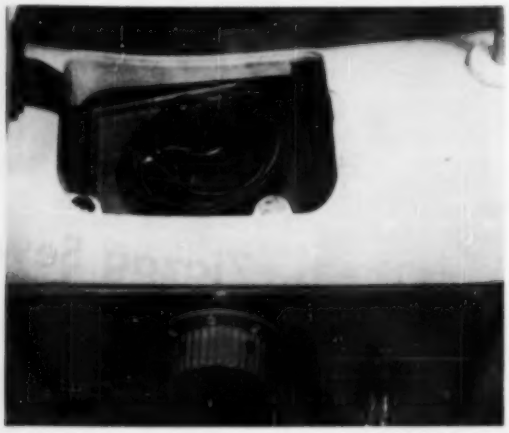
Women soon learned that a good deal of care, practice, and skill were required if results in decorative stitching were to be satisfactory. The manual controls were not always easy to operate. Furthermore, as one of CR's consultants put it, to be entirely successful the housewife had to have a sort of built-in timer so that she would zig when she was supposed to and zag when she was supposed to, to keep the pattern uniform.

Manufacturers were quick to recognize this important limitation of their new machines. Many of them soon brought out automatic or semiautomatic models which took over the job of producing a uniform repetition of stitch patterns.

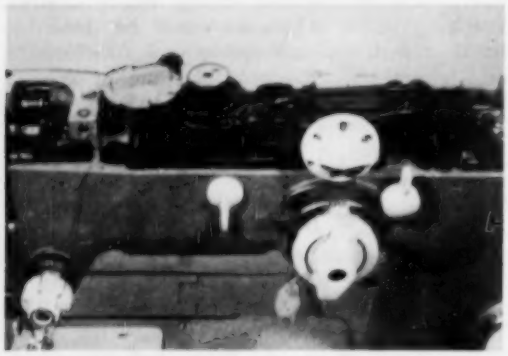
For an explanation of the operations of zigzag machines see "The how and why of zigzag sewing machines," page 7.

An early model of an automatic zigzag sewing machine uses an attachment that manipulates the manual controls to move the needle from side to side and shift the needle position in regular rhythm. The newer machines have this mechanism built in. On two of the machines CR tested (*Necchi Supernova* and *Elna Supermatic*), the built-in mechanism will also reverse the stitching

The single cam on the front of the Singer 206 is easily changed. Controls at left are manually operated for position of needle and stitch width.



The Necchi Supernova has cams in the top of the sewing head. Knob on the front of the machine is to lengthen the pattern; metal tab at lower right is for position of needle.



The cams of the Pfaff 230 and the numbered dial on top for selecting the cam or cams to be used are in a unit located in the sewing head (the cover is off, in this picture).

and thereby increase the number of attractive and interesting patterns that can be made.

On some machines, cams are put on as needed; others have a stack or assembly of cams built in and a control provided for selecting the one wanted. Additional cams can be purchased for most of these machines, and in one case it is said that a total of several thousand stitch combinations is possible.

These new automatic machines have a much more complicated mechanism than the old-style sewing machines. Most dealers set up a series of demonstration lessons that are available free or for a small fee. Any woman who buys a zigzag machine can profit by instruction. Even if she has lessons, however, the operator should use the machine frequently enough so that she will not lose her recollection of the settings or her skill in manipulating the controls. Home demonstration agents tell CR that many women who have previously received instruction on a zigzag machine will bring it back to sewing schools with the request that they be helped once more to master the operations.

Needles and thread

Even when the operator has mastered the several controls on her zigzag machine, there may still be a few stumbling blocks to successful sewing. The proper sewing thread is an important factor. Most of the manufacturers of the zigzag machines recommend particular kinds of sewing thread, especially for decorative stitching. Thread that is bunchy or not smooth is likely to break or cause the design to pile up. If this should happen at a critical point in the sewing, a decorated collar or pocket could be ruined.

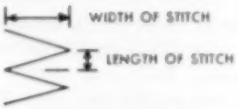
In straight sewing it is often possible to get reasonably satisfactory results without paying much attention to the needle and the thread. On the other hand, zigzag stitching requires a careful adjustment of the machine, particularly with respect to tension, and one must use the right needle and thread for the particular fabric.

Furthermore, patterns that are quite satisfactory on one material may look quite different on another. It is always a good idea to do a test pattern on the fabric on which it is to be used to be sure that the machine is in proper operating condition for that fabric.

The how and why of zigzag sewing machines

STEP I

In its simplest form a zigzag sewing machine moves the needle at right angles to the direction of the motion of the cloth (one stitch to the right, the next to the left), which makes a pattern like this (A1) or this (A2) wider or narrower, as one chooses. When the stitches are made closer together, they look like this (A1) and this (A2). The width and the length of the stitches may perhaps be more easily understood as follows:



When the width of the zigzag stitch (i.e., the amount of the swing of the needle from left to right) is changed rythmically while sewing, the stitches can form a pattern like this (B1) or like this (B2) or this (B3). All these patterns are along the center line of needle travel.

STEP II

Zigzag machines also have a mechanism to permit shifting the needle to the left or to the right of the center (or normal) position on the machine. This makes it possible to make a pattern like this (C1) or this (C2).

To make a straight pattern, like A1 or A2, one sets the control for the stitch width and sews. To make a shaped pattern, like B1 or B2, or a repeated pattern, like C1 or C2, on a manually operated machine, the control for the width of the zigzag stitch or the control for the needle position must be moved to and fro in exact tempo and the sewing speed held constant. These patterns can be shortened or elongated by the quickness with which the control is shifted from one position to the other. On a non-automatic machine, this all takes practice and experience if results are to look right.

Patterns like this (D) combining continuous changes in width of the zigzag stitch and position of the needle require two hands on the two controls, and the machine must feed the cloth evenly and smoothly if the line of stitching is to be straight. Otherwise the machine must be stopped for each shift in position.

STEP III

All zigzag sewing machines will make Steps I and II, some manually, some automatically. On some automatic machines Steps I and II can be done simultaneously by means of cams controlling the width of the zigzag stitch and also controlling the position of the needle. One pattern combining these motions looks like this

STEP IV

As can be seen from these examples, all these patterns are continuous as to the direction like this A skilled operator with considerable experience and lots of patience could also use the control which makes the machine stitch forward or backward to make a pattern with stitches in the reverse direction of the original sewing motion like this Now some machines have added a cam to move the stitch length reversing control thus making this motion automatic, too, and making possible intricate patterns like this Of the machines Consumers' Research tested in its recent study only two had this feature.

STEP V

As has been noted before, designs can be changed by increasing the stitch length and therefore the space between stitches from this to this Some machines have a variable or adjustable drive for the cams controlling the pattern. This drive rotates the cams slower or faster with reference to the speed of the machine. This control makes it possible to change the character of the pattern, for example, from this which might be suitable for edging a collar on a baby's dress, to this which might be suitable for edging a pillow slip, with no change in cam. Moreover, this change can be made while the machine is sewing and may be combined to give a multiplicity of patterns or variations for any type of stitch. There were only two automatic machines having this feature in CR's test.

* * *

The appearance of any pattern can be changed on nearly all zigzag machines by the use of a double needle and by using different colored or varicolored thread. On most machines the twin needles are alongside each other as you look at the machine from the front, resulting in parallel stitches and making possible patterns like this On a few machines the needles are one behind the other, putting the threads together for any lengthwise stitch and separating them in distance according to the degree of side-to-side movement like this

Not every machine will perform all of these steps automatically. Some require use of manual controls for one or more of the steps. Details regarding specific machines appear in the listings.

Instruction books

Instruction books for the machines, unfortunately, are not always clear and helpful. Even the skilled and experienced sewers who used the machines in CR's study had difficulty in following some of the directions. Essential steps were not always given in proper order and parts were sometimes not clearly identified. Some instructions suffered from a too-literal translation from a foreign tongue into English.

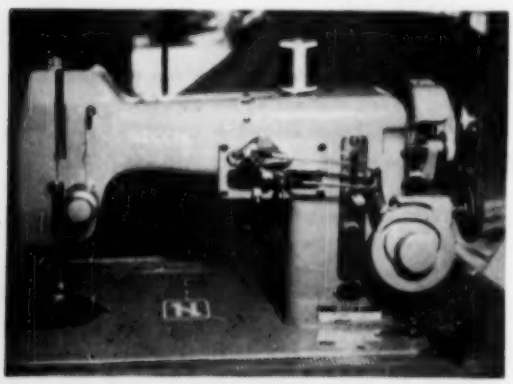
A common fault of the instruction books was not stating clearly and at the beginning how to do straight sewing. This oversight was responsible for considerable frustration, particularly when the operator was sewing on a machine on which a number of settings had to be made. Zigzag machines can be confusing to the eye, especially if there are many knobs, buttons, and levers that at least look as if they should be set, pushed, or moved. A housewife confronted with a piece of complex machinery is likely to be baffled if the instructions don't start with those for doing straight sewing (which after all is what she will be doing most on any sewing machine).

On the other hand, some manufacturers use ingenious devices to make it easy for the operator to set the dials and knobs for automatic zigzag operation.

Check on the service

CR urges the buyer of any of these new sewing machines to check on the availability of repair parts and services before buying. Recently the National Association of Independent Sewing Machine Dealers announced an exchange of service program to insure free service for a sewing machine owner wherever she goes in the United States and Canada. Under the plan a consumer buying a machine will be given, in addition to the guarantee issued by the manufacturer, one which will assure free service for a stipulated length of time which will be honored by any association member. There are said to be over 1200 dealers in the group participating. The Singer Manufacturing Company, not included in this group, claims over 1700 retail outlets in the United States and Canada. Thus service would seem to be readily available for most machines, but it would be a good idea to inquire about it.

The *Singer* zigzag machine is made in the United States and in Great Britain; the others CR tested, however, were manufactured abroad. From the Western Zone of Germany comes *Adlermatic*, *Bell*, and *Pfaff;* from Italy: *Free Westinghouse* (*Borletti*) and *Necchi;* from Japan: *Brother;* from Sweden: *Viking;* from Switzerland: *Elna* and *Morse*.

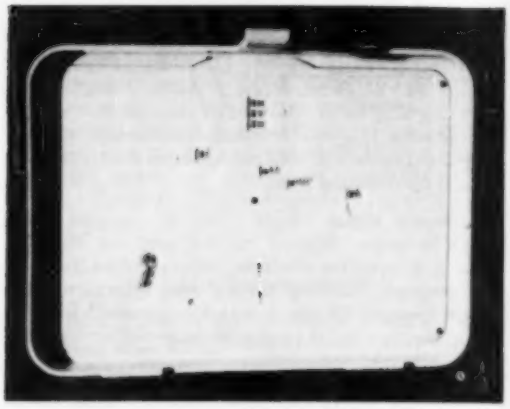


Metal rods connect the cam to the different manual controls and provide automatic operation of the Necchi BU Mira. Women considered this machine rather complicated to set up for automatic zigzag sewing.

CR's tests

The zigzag machines tested had either rotary or oscillating shuttle mechanisms. The rotary is judged to be a little smoother than the oscillating, but both are satisfactory for motor-driven machine sewing. Sewing machine men claim the oscillator action gives a smoother straight stitch, but the rotary action causes less vibration. A bobbin located in horizontal position is easier to insert than a bobbin in a vertical position in some locations, but a bobbin in a vertical position facing the operator is also easy to insert. The *Singer 306* has the bobbin in the latter position, as does the *Adler*, *Bell 402* and *501*, *Morse*, *Pfaff*, and *Viking* machines. All had bobbin winders that release automatically when the bobbin is full, except the *Viking*. All had a hinged presser foot, sewed forward and reverse, and had a switch for the light. All could use two needles, one alongside the other, except as noted. All had indexed upper thread tension adjustment, but only the two *Elna* machines had an indexed lower thread tension adjustment as well.

The machines were given both laboratory and practical sewing tests by CR, and were examined for mechanical characteristics and electrical properties. The operation of the machine and the convenience of using it, probable ease of maintenance, and safety of the machine electrically were among the factors taken into consideration in arriving at the final rankings. Prices given were supplied by the manufacturer, but may vary depending on the kind of case or cabinet desired.



The lid of the accessory box of the Necchi Supernova has patterns, controls, and settings clearly diagrammed.

The plastic guide wheel supplied with Pfaff Automatic machines is simple and easy to use.

Radio interference was noticeable with all machines except the two *Pfaff Automatic* machines.

The *Singer 306* and the two *Elna* machines were outstanding for their performance in tests for electrical safety. Leakage current was negligible on all three; it was clear that great care had been taken in their design and manufacture to insure electrical safety.

Automatic zigzag sewing machines

A. Recommended

The following four zigzag sewing machines were the most versatile of all of those included by CR in this study.

Elna Supermatic (Necchi Sewing Machine Sales Corp., 164 W. 25 St., N.Y.C.) About $305. A portable machine with a soft green finish, with open arm. Weight in case, 29½ lb. (head only, 18 lb.), relatively light. Case forms a work surface. Rotary sewing action. Bobbin in horizontal position. Lacks control to drop feed, but accessories include darning plate that covers feed.

Automatic zigzag sewing (Steps I, II, III, IV) required a cam or cams (no instructions for manual zigzag sewing are provided). 15 cams supplied with machine; 40 additional cams available at 50c to $1 each. One of two machines tested in which cams provide for usual zigzag operation and also automatic reverse.

Necchi Supernova (Necchi Sewing Machine Sales Corp.) About $340. Gray-green and ivory, smooth-finished machine. Weight in case, 43 lb. (head only, 28 lb.). Oscillator mechanism. Bobbin in vertical position. Two needles are one behind the other. Has push-button control for dropping feed dog. Two-speed motor (slower speed is useful for beginners and for some intricate sewing).

Automatic zigzag sewing (Steps I, II, III, IV, V) provided by interchangeable cams or cam assemblies. Supplied with the machine are 5 cam assemblies, 14 cams, and 3 bushings to enable the housewife to make up additional assemblies. One of two machines having a control to lengthen or shorten the pattern without changing stitch length. Zigzag stitching could also be controlled manually. Push-button controls used for feed drop and reverse operation. The most versatile of the zigzag machines tested. Performed all usual zigzag operations, singly or in combination, and included automatic reverse.

Pfaff Automatic 230 (American Pfaff Co., 373 Fifth Ave., New York 16) $330. Grained beige finish. Weight of head, 37 lb. (heavy). Rotary mechanism. Bobbin in vertical position facing operator. Has built-in needle threader. Built-in light can be lowered. Control for dropping feed.

Automatic zigzag sewing (Steps I, II, III, V) provided by built-in cams. One of two machines having a control to lengthen or shorten the pattern without changing the stitch length. Zigzag stitching could also be controlled manually. The automatic unit can be purchased separately and inserted into recent models of the *Pfaff Dial-A-Stitch 230* machine.

Pfaff Automatic 332 (American Pfaff Co.) $340. Grained beige finish. About the same as the *Pfaff 230*, but a portable machine with a built-in motor and open arm. Weight in case, 37 lb. (head only, 26½ lb.).

* * *

The following three machines were first-class in all respects though they were not so versatile as the four already listed.

Bell-O-Matic 501 (Bell Portable Sewing Machine Corp., Freeland, Pa.) $300. Green portable. Weight in case, 50½ lb. (head only, 38 lb.), heavy.

Oscillator mechanism. Bobbin in vertical position facing the operator. Knob for dropping feed.

Automatic zigzag sewing (Steps I, II, III) provided by interchangeable cams. Zigzag stitch could also be controlled manually.

Singer 306 (Singer Sewing Machine Co., Singer Bldg., 149 Broadway, New York 6) $300. Beige or black finish. Weight of head, 22½ lb. (light). Rotary action. Bobbin in vertical position facing operator. To drop feed required lifting head and loosening a thumbscrew on the bottom.

Automatic zigzag sewing (Steps I, II, III) provided by interchangeable cams. Zigzag stitching could also be controlled manually. Six cams supplied with machine, additional cams available at 35c each or $1.25 for a set of four. This machine was easy to use and had good instructions with good index.

Viking, Type 21 (Consolidated Sewing Machine Corp., 1115 Broadway, New York 10) $290. A portable machine with a soft green, smooth finish, with open arm. Weight in case, 29½ lb. (head only, 22½ lb.), light. Rotary mechanism. Bobbin in vertical position facing the operator. Knob for dropping feed and also cover for feed. Two-speed drive.

Automatic zigzag sewing (Steps I, II, III) provided by three interchangeable 5-cam stacks. Zigzag stitching could also be controlled manually. Cam selector judged relatively inconvenient, otherwise easy and simple to operate. Only machine tested which caused marked TV interference.

B. Intermediate

Adlermatic 189A (Adler of America, Inc., 15 Exchange Place, Jersey City 2, N.J.) $320. Portable with soft green, smooth finish. Weight, 45 lb. (head only, 36 lb.). Rotary mechanism. Bobbin in vertical position facing operator. Knob for dropping feed.

Automatic zigzag sewing (Steps I, II, III) provided by three interchangeable cam stacks supplied with machine. One additional cam available at $1.25. Easy to use. One of 2 motors fitting this machine failed to pass electrical tests, otherwise would warrant an *A-Recommended* rating.

Adlermatic 153A (Adler of America, Inc.) $290. Portable with soft green, smooth finish. Weight, 47 lb. (head only, 37½ lb.), heavy. Oscillator mechanism. Bobbin in vertical position facing operator. Knob for dropping feed.

Automatic zigzag sewing (Steps I, II, III) provided by interchangeable cam stacks; three supplied with machine, one additional cam available at $1.25. Zigzag stitch could also be controlled manually. Easy to use. One of 2 motors fitting this machine failed to pass electrical tests, otherwise would warrant an *A-Recommended* rating.

C. Not Recommended

Brother Select-O-Matic (Brother International Corp., 122 W. 27 St., N.Y.C.) $270. Portable with smooth blue finish. Weight in case, 44 lb. (heavy) (head only, 33½ lb.). Oscillator mechanism. Bobbin in vertical position. No provision for double needle. Knob for dropping feed.

Automatic zigzag sewing (Step I) provided by 7 built-in cams. Manual control used for Step II. An easily operated machine, but it required frequent adjustment. During sewing test several needles were broken. Of the five motors obtained for this machine, four failed to pass tests for electrical safety.

Morse Calanda (Morse Sewing Machine & Supply Corp., 122 W. 26 St., New York 1) $320. Blue glossy finished head. Weight in case, 45 lb. (head only, 33½ lb.). Rotary mechanism. Bobbin in vertical position facing operator. Knob for dropping feed. "Fabric selector" dial to adjust feed for fabrics of different weights.

Automatic zigzag sewing (Steps I, II) provided by 18 interchangeable cams, easily inserted at the front of the machine. Stitch being selected easily visible through window. Zigzag stitching could also be controlled manually but only when a cam was in position in the machine. Operators found it easy to set this machine for straight stitching. Motor failed to pass tests for electrical safety.

Necchi BU Mira (Necchi Sewing Machine Sales Corp.) $287. Portable with gray, smooth finish. Weight in case, 45½ lb. (head only, 34 lb.). Oscillator mechanism. Bobbin in vertical position. Two needles are one behind the other. Two-speed motor.

Automatic zigzag sewing (Steps I, II, III) provided by interchangeable cams. Six double cams which can be used on either side (equivalent to 12 single cams) provided with machine. Zigzag stitching could also be controlled manually. Easy to use for manual operation, but was confusing to set up for automatic operation. Three of 6 motors fitting this machine failed to pass tests for electrical safety.

Manual zigzag machines

A. Recommended

Bell 301 (Bell Portable Sewing Machine Co.) $200. Green finished portable. Weight in case, 43½ lb. (head only, 31½ lb.). Rotary mechanism. Bobbin in vertical position. Zigzag controls judged easy to use and had stops to give positive positions to control settings. Knob for dropping feed.

Bell DeLuxe, Model 402 (Bell Portable Sewing Machine Corp.) $260. Green smooth finish. Weight in case, 45 lb. (head only, 34 lb.). Different rotary mechanism from *Model 301*, and bobbin faces operator. "Streamlined design" includes built-in light and different location and style of some controls, making for a neater looking machine than the *301*.

B. Intermediate

Free-Westinghouse 70 (Free Sewing Machine Co., Rockford, Ill.) $170. Green, smooth finish. Weight of head only, 34 lb. Rotary mechanism. Bobbin in vertical position facing operator. Zigzag controls judged easy to use and had stops to give positive position to settings; shielding of rheostat control for motor was good. One of 3 motors failed to pass electrical tests.

C. Not Recommended

Pfaff Dial-A-Stitch 230 (American Pfaff Co.) $280. Grained beige finish. Weight of head only, 33½ lb. Rotary mechanism. Bobbin in vertical position facing operator. Lacked stops to give positive positions to control for stitch width. Knob for dropping feed. Motor failed to pass test for electrical safety.

Straight stitch sewing machines

A straight stitch sewing machine offers a great deal in the way of sewing service. On it you can do all the regular sewing jobs, from simple hemming to fine tailoring, and with practice you can do a great deal more with the aid of attachments. Blind hemming, overcasting, and buttonholing are all possible. If you intend to use a machine primarily for plain sewing, simple dressmaking and tailoring, a zigzag machine might not be worth the extra amount it costs (about $75 on a *Singer*). Because straight sewing machines have been made for a good many years, they are usually well constructed mechanically, do smooth even stitching, have good reverse mechanism for backward and forward stitching, and are easily adjusted for sewing on different fabrics.

Because straight stitching machines have not changed much, CR's report for September 1952 listing straight sewing machines is still useful. Many of the brands listed are still current models even today (reprints from September 1952 BULLETIN available at 15 cents). The straight sewing machines included in CR's latest study are listed here. The list is not intended to be comprehensive, however, but is to be regarded only as a supplement to the September 1952 report.

All those listed had a hinged presser foot and sewed forward and reverse.

A. Recommended

Singer Slant-needle, No. 301A (Singer Sewing Machine Co., New York 6) $228. Beige-colored or black head. Weight of head only, 16 lb., light. Rotary mechanism, gear drive, vertical bobbin. Has numbered tension adjustment for upper thread, sews forward and reverse, has stops to equalize forward and reverse stitches. Has provision for dropping feed. Foot rheostat control, convertible for knee use. Shielding of rheostat (speed) control for motor (protection against accidental access to live electrical parts), good. Slant needle makes it easier to thread the needle and to see stitching. Exceptionally smooth running at all speeds.

Elna Transforma (Necchi Sewing Machine Sales Corp.) $180. Portable open-arm with soft green finish. Weight in case, 28½ lb. (head only, 17 lb.), light. Case forms work surface. Rotary mechanism, friction drive, horizontal bobbin. Numbered tension adjustments. Sews forward and reverse; has stops to equalize forward and reverse stitches. Has hinged presser foot. Knee rheostat control. Lacked control to drop feed, but accessories include darning plate that covers feed. Shielding of rheostat control, good. This machine can be converted to an automatic zigzag by purchasing a special unit.

C. Not Recommended

Necchi BF Mira (Necchi Sewing Machine Sales Corp.) $157. Smooth gray finish. Weight in case, 41½ lb. (head only, 30½ lb.). Oscillating mechanism. Belt drive. Bobbin in vertical position. Has numbered tension adjustment; sews forward and reverse. Has stops to equalize forward and reverse stitches. Had provision for dropping feed. Has foot control, but shielding of rheostat control against a young child's explorations only fair. See comment under *Necchi BU Mira* regarding tests of motors for electrical safety; in other respects a very good machine.

Consumers' Research gratefully acknowledges the very valuable aid of W. C. Krueger, Extension Agricultural Engineer, New Jersey Extension Service, to CR's staff in the analyses of the various machines, and in the preparation of this article.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF Consumers' Research Bulletin published monthly at Washington, N.J., for September 1954-September 1955. 1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Consumers' Research, Inc., Washington, N. J.; Editor, F. J. Schlink, Washington, N. J.; Managing editor, none; Business manager, Charles D. Cornish, Washington, N. J. 2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Consumers' Research, Inc., a non-profit corporation, not a business enterprise, not operated for profit; Washington, New Jersey. Stock, none. 3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None. 4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. C. D. Cornish. Sworn to and subscribed before me this twenty-seventh day of September, 1955, Elizabeth B. Smith [Notary Public]. (My commission expires July 31, 1958.)

Twin-Lens Reflex Cameras

THE twin-lens reflex camera no doubt owes its great popularity to the fact that it comes close to being an all-around camera. It is particularly advantageous for those who do not wish to own and operate separate cameras for black-and-white and color pictures. This is not to say that the twin-lens reflex is superior for color to the 35 mm. camera, for the latter, from the standpoint of convenience and economy, holds undisputed first choice for the making of color transparencies.

For general black-and-white work, good twin-lens reflex cameras are hard to beat. A summary of the advantages and disadvantages of these cameras follows.

Advantages

Focusing and viewing are done on a ground-glass screen, which under normal lighting conditions and for the great majority of pictures eliminates the need for using a focusing scale or range-finder. The user sees an image that is exactly the same size as the one that is to appear on the negative.

The scene on the ground glass is visible to the user at all times, making the camera especially serviceable for "action shots" such as pictures of children and animals.

The size of the black-and-white contact prints, 2¼ x 2¼ inches, is large enough to permit satisfactory viewing without enlargement (however, mail-order and other photofinishers provide projection prints enlarged to 3½ x 3½ inches, which is a very useful and practical size).

So-called automatic models permit exposures to be made in fairly rapid sequence, which is a useful feature for some types of photographic work.

Pictures and slides taken with a twin-lens reflex are usually better composed than those taken with cameras equipped with the telescopic or peep-hole finders generally used on 35 mm. and other small cameras. This is because the photographer can safely work closer to his subject since he sees the actual scene as it will be projected upon the negative, and thus is able to fill the picture area with the subject matter which is of most interest, rather than having to make an allowance for inaccuracy of a view-finder.

Operation is simple; anyone can learn to take good pictures with a twin-lens reflex, for it is almost as easy to use as a simple box camera.

Color film is available in the 120 size to make 2¼ x 2¼ inch color transparencies, or adapters can be used to take pictures on 35 mm. or *Bantam* size film.

Rolleicord V

Rolleiflex Automatic

Rolleiflex Automatic 2.8C

Disadvantages

The scene observed on the ground glass is not exactly the same as that obtained on the negative if the taking lens is used at a considerably smaller aperture than the viewing lens. Thus, the depth of field will not necessarily be correctly reflected on the ground glass, and background objects which may have been out of focus on the ground glass will be sharper on the negative.

As the image is reflected upon the ground glass by a mirror set at a 45-degree angle, the image will be right side up, but reversed left to right; this is hardly ever likely to be of any particular importance.

Because the viewing lens is set about 1½ inches above the taking lens, the lenses do not give identical fields of view when near objects are important in the picture. This difference in view is known as parallax error. Only the better twin-lens reflex cameras are corrected for this kind of error.

On most twin-lens reflex cameras, interchangeable lenses are not available; this is a serious disadvantage for those who have need of a wide angle and a telephoto lens, besides the usual one which covers a field of view of about 40 degrees. The recently announced *Tele-Koniflex* (not yet tested by CR) is an exception; that camera uses a system similar to that of the new *Retina IIc* and *IIIc*, in that the front elements of the taking lens can be removed and replaced with an auxiliary lens to form a telephoto lens, and a telephoto attachment or auxiliary lens is placed over the viewing lens.

In very weak light, focusing can be very difficult, and under those unusual conditions it will often be necessary to focus by means of the scale of distances in feet at the focusing knob.

In the 2¼ x 2¼ inch size, twin-lens reflex cameras make excellent colored transparencies, but these cost about 30 percent more than 35 mm. transparencies. Until recently, the 2¼ x 2¼ inch transparencies were returned by the processors unmounted (mounting for oneself is not easy and requires considerable time); now some processors are returning them in cardboard mounts. Unfortunately, the 2¼ x 2¼ inch color transparencies are not quite large enough to be viewed properly without projection (or magnification in a table viewer) if the maximum effect and beauty of the color are to be brought out.

When an adapter for 35 mm. or *Bantam* size film is used, usually only pictures with the long dimension vertical are taken, as the camera is less convenient to use on its side. When the customary 75 mm. or 80 mm. lens is used with the small film, the effect is like that of a telephoto lens. (The viewing angle will be reduced from 40 degrees to about 25 degrees. The eye prefers pictures taken with a lens with not more than about a 40-degree horizontal angle of view. Practically, 40 degrees is a good compromise, considering camera size, usual subject-distances, and other factors.)

Twin-lens reflex cameras are somewhat bulky, because of the space taken by the viewing system and its lens.

Graflex 22

Ikoflex Ia

Minolta Autocord

Figure 1

One camera from the Soviet Zone was marked as to origin with a blurred stamping as shown at the top. Reproduction is about 4½ times actual size. MADE IN GERMANY *was also stamped on the leather-like covering of the camera body as shown in the lower picture, and could hardly be read unless the light falling on the camera body came from the right direction. Made in Germany is, of course, a misleading mark in this case. Reproduction of this Made in Germany line is about 2 times actual size.*

Cameras from the Soviet (Eastern) Zone of Germany

Since June 1953, all goods, including cameras imported from East Germany, have been required to be marked "Made in Soviet-Occupied Germany," or its equivalent. The Tariff Act, as amended in 1952, states in part that merchandise manufactured wholly or in part in any foreign country by convict or/and forced labor shall not be entitled to entry. This law does not appear to have been well enforced. Cameras from East Germany are now marked "Germany USSR Occupied," but on some cameras seen by CR the last two letters of USSR are so blurred that they read Germany US Occupied, giving the impression that the cameras were made in the American Zone (see Figure 1). CR will continue, as in the past, to state the country of origin of foreign products listed; the products themselves will, of course, be rated on their merits alone. The subscriber will decide for himself whether or not he wishes knowingly to purchase goods made in a country behind the Iron Curtain.

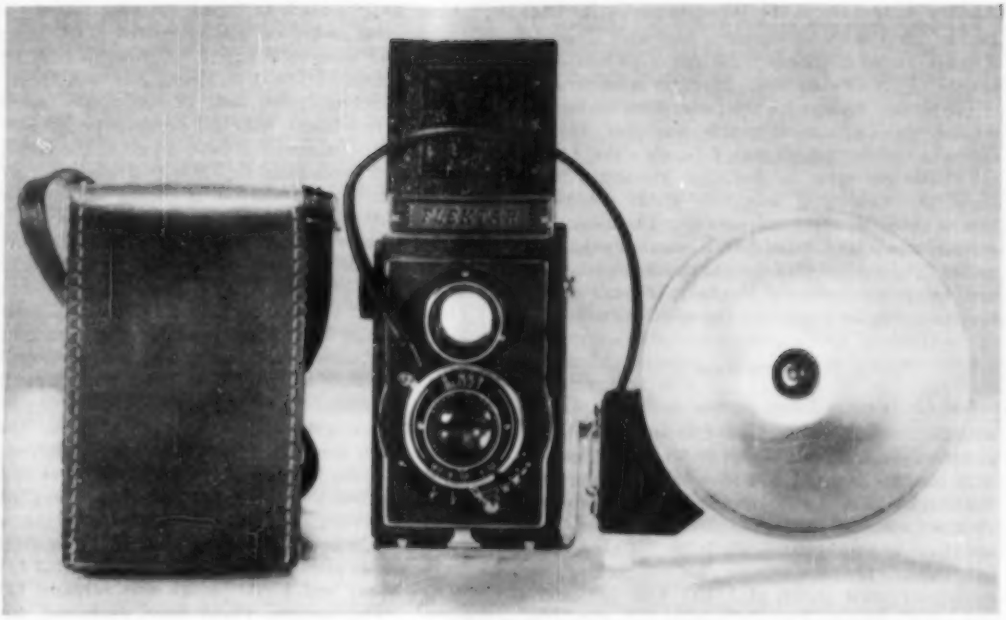
* * *

All of the following cameras take 12 pictures 2¼ inches square on No. 120 film. The cameras

Tower Reflex, Model I

Ikoflex IIa

Minoltacord



Flektar

use three different methods for loading the film and then positioning it for the first and succeeding exposures. The "automatic" system used by *Rolleiflex* is complex in design but the most simple to use. The photographer threads the film into the camera, closes the cover, and turns the crank until it stops. The film is then in position for the first exposure. When the crank is turned, it cocks the shutter and advances the film to a stop for each subsequent exposure.

With the "semiautomatic" system, the user threads the film into the camera, turns the knob until marks on the film backing paper are opposite marks on the body of the camera, closes the cover, sets the counter dial (not necessary on some models), and turns the knob or crank until it stops. The film is then in position for the first exposure. For each subsequent exposure, the knob or crank is again turned until it stops.

The "manual" system is the pre-*Rollei* method, the same as that used with box cameras. The user threads the film into the camera, closes the camera, and turns the knob until the first exposure number is visible through a small red window.

A. Recommended

Rolleicord V (Distributed by Burleigh Brooks, Inc., 10 W. 46 St., New York 36) $149.50, including case. Made in Western Zone of Germany. *Schneider Xenar* coated *f*/3.5 taking lens and *f*/3.2 viewing lens of 75 mm. focal length. Focused by turning knob on side of camera. *Synchro-Compur* shutter with rated speeds of 1/500 to 1 sec., and bulb. Built-in M-X synchronization and delayed-action release. Double-exposure prevention with provision for intentional double exposures. Light value scale coupled to lens aperture and shutter speed controls. (As shutter speeds are changed, there is a corresponding change in the lens opening, keeping effective exposures constant. Independent setting of exposure time and aperture are, however, possible, when the user desires it.) Reflex viewing and focusing on ground glass, with built-in magnifier. Corrected for parallax. Eye-level finder is provided; when this is used, focusing must be done by scale instead of ground glass. Built-in film-speed indicator. "Semiautomatic" film positioning (see text). Winding the film does not cock the shutter. Quality of lens, good. Workmanship and finish, excellent. **3**

Rolleiflex Automatic (Distributed by Burleigh Brooks, Inc.) $234.50, including case, with coated *f*/3.5 *Schneider Xenar* 75 mm. taking lens; $249.50, including case, with coated *f*/3.5 *Zeiss Tessar* 75 mm. taking lens. *f*/2.8 viewing lens. Made in Western Zone of Germany. Similar to *Rolleicord V*, except for following added features: Film is advanced by crank which is coupled to the shutter cocking mechanism; this eliminates need for a separate cocking operation. "Automatic" film positioning (see text). Eye-level view-finding. Eye-level focusing by means of a mirror in the hood. Quality of both *Schneider Xenar* and *Zeiss Tessar*, good (approximately equal). The extra price ($85 and $100) for *Rolleiflex* cameras over the *Rolleicord V* does not seem justified for the few extra features provided. **3**

Rolleiflex Automatic 2.8C (Distributed by Burleigh Brooks, Inc.) $309.50, including case, with *Schneider Xenotar* coated 5-element *f*/2.8 lens of 80 mm. focal length. *f*/2.8 viewing lens. Made in Western Zone of Germany. Except for the faster lens, and minor refinements, such as adjustable magnifier, built-in exposure counter for 35 mm. film, etc., the *2.8C* is essentially the same as *Rolleiflex Automatic*, listed on p. 15. Quality of lens, very good; considered best of the relatively fast lenses tested to date. The recently announced *Model 2.8D* is essentially the same as the *2.8C* except that the shutter has click stops and, as on the *Rolleicord V*, the light-value scale is coupled to the lens-aperture and speed controls. **3**

B. Intermediate

Graflex 22 (Graflex, Inc., Rochester, N.Y.) $74.50, with *Graftar f*/3.5 coated lens of 85 mm. focal length and *Century* shutter. Case, $9.50. Same camera with *Graphex* shutter, $94.50. *f*/3.2 viewing lens. Focused by turning knob on side of camera. *Century* shutter (automatic or self-cocking type) had rated speeds of 1/200, 1/100, 1/50, 1/25, 1/10 sec., time, and bulb. *Graphex* shutter, not self-cocking, had additional rated speeds of 1/400, 1/5, 1/2, and 1 sec. Both shutters have built-in M-F-X synchronization (medium and fast bulbs, and electronic flash). Reflex focusing and viewing on ground glass which had a Fresnel lens to improve brilliancy of image. Built-in magnifier. Not corrected for parallax. Eye-level view-finder. "Manual" film positioning. *Graftar* lens, of three-element construction, found to be of mediocre quality. Despite the $20 difference in price, both models use the same lens; the extra price provides only a few additional shutter speeds. This camera is not considered to be significantly different from the *Ciroflex* which it succeeded. **2**

Ikoflex Ia (Distributed by Carl Zeiss, Inc., 485 Fifth Ave., N.Y.C.) $110, including case. Made in Western Zone of Germany. *Zeiss Tessar* coated *f*/3.5 taking lens and *f*/3.5 viewing lens of 75 mm. focal length. Focused by turning knob on side of camera. *Prontor S.V.* shutter with rated speeds of 1/300 to 1 sec., and bulb. M-X flash synchronization, delayed-action release, double-exposure prevention. Had Fresnel field lens to increase brightness of view on ground glass. Built-in magnifier. Eye-level view-finder; with this, scale must be used for focusing instead of ground glass. To help avoid effects of inaccurate view-finding due to parallax errors, the ground-glass viewing screen is made smaller than the picture size (not, of course, a desirable arrangement). Film loading, somewhat complicated. "Semiautomatic" film positioning. Winding the film does not cock the shutter. Quality of lens, fairly good. This camera, judged to be somewhat less desirable than *Rolleicord V*, is also available at $90 (including case) with *Novar f*/3.5 taking lens (a 3-element lens of a type inferior to the 4-element *Schneider Xenar* or *Zeiss Tessar*). **2**

Minolta Autocord (Distributed by Kanematsu New York, Inc., 150 Broadway, New York 38) $99.50. Case, $9.95. Made in Japan. *Rokkor* coated *f*/3.5 taking lens and *View Rokkor* coated *f*/3.2 viewing lens of 75 mm. focal length. *Optiper* shutter with rated speeds of 1/400 to 1 sec., and bulb, built-in M-X synchronization and delayed-action release. Built-in magnifier. Also had eye-level finder, but in using this, one does not have access to the focusing screen. "Semiautomatic" film positioning. As on the *Rolleiflex*, the shutter is cocked automatically when the film is advanced. Camera has double-exposure prevention with provision for making intentional double exposures. Had safety lock on release button to prevent accidental exposure. Focused from 3.3 ft. to infinity by lever at front of camera under taking lens; lever is conveniently placed for one-hand operation. Camera was not corrected for parallax. Shoe located on side of camera for mounting accessories. Lens mount designed for bayonet-type accessories, like *Rolleiflex* and *Rolleicord*. Quality of lens, good; at full aperture, lens resolved 48 lines per mm. at center, 28 lines per mm. at edges. No inspection sheet giving performance of lens (resolution) accompanied this camera, but there was reason to believe this was an oversight. The shutter speeds were within permitted tolerances except 1/100 (30% slow) and 1/200 (which was actually 1/100 sec.). This camera would have warranted an *A* rating had the shutter mechanism been fully enclosed to prevent entrance of dirt. **2**

Tower Reflex, Model I (Sears, Roebuck & Co., Chicago) $77.50. Case, $6. Made in Japan. *Tower f*/3.5 coated lenses of 75 mm. focal length focused from 3 ft. to infinity by turning of knurled knob on side of camera. Shutter has 8 rated speeds from 1 to 1/200 sec., and bulb. F-M flash synchronization. Waist-level finder, built-in magnifier. Eye-level view-finder; with this, focusing scale must be used. "Semiautomatic" film positioning. Winding film did not cock shutter. Camera was not corrected for parallax, and lacked double-exposure prevention. Quality of lens, fair (resolved 40 lines per mm. at center, falling off to 10 lines per mm. at edge of negative). Shutter speeds, satisfactory, except as follows: 1 sec., 30% slow; 1/100, 25% slow. Resembles an older model *Rolleicord* in design. **2**

Ikoflex IIa (Distributed by Carl Zeiss, Inc.) $142, including case. Similar to *Ikoflex Ia*, except that the *IIa* is equipped with a *Synchro Compur* shutter; the film transport is coupled to the shutter, eliminating need for cocking; and shutter settings (stop and speed) are shown in windows over lens mount. **3**

C. Not Recommended

Minoltacord (Distributed by Kanematsu New York, Inc.) $69.50. Case, $9.95. Made in Japan. *Promar SIII* coated *f*/3.5 taking lens and *View-Promar* coated *f*/3.2 viewing lens of 75 mm. focal length. *Optiper* shutter with rated speeds of 1/400 to 1 sec., and bulb. Built-in M-X synchronization and delayed-action release. Similar to *Minolta Autocord* except for lens, lens and shutter mount, shutter cocking, and double-exposure prevention features.

"Semi-automatic" film positioning. Winding the film does not cock shutter; cocking must be done manually for each exposure. Lacked double-exposure prevention. Quality of lens, only fair. At full aperture, *f*/3.5, resolved about 40 lines per mm. at center, falling off to 10 lines per mm. at edges. (Inspection sheet accompanying camera correctly represented lens performance, for it gave resolving power at center as 43 lines per mm., 10 lines per mm. at periphery.) To be rated excellent, a 75 mm. lens should resolve at least 33 lines per mm. over a large part of the field. Shutter speeds were within permitted tolerances except 1/100 sec., which was 25% slow. Large openings in sides of shutter exposed mechanism to entrance of dust and dirt (a fault that has been noted on other Japanese shutters); otherwise, camera was fairly well designed and made, and would have warranted a *B* rating. **2**

* * *

The following camera is in a price class with the non-focusing imitation-reflex cameras but is a true twin-lens reflex and, like others of that type, has ground-glass focusing. A number of low-priced twin-lens reflex cameras, similar to the *Flektar* except for the name plate, are sold by various New York stores, and by mail-order camera dealers.

B. Intermediate

Flektar (Distributed by Peerless Camera Stores, 415 Lexington Ave., New York 17) $16.95, including flash gun and case. Made in Soviet Zone of Germany. (See text, regarding country-of-origin labeling.) *ROW Pololyt* coated *f*/3.5 viewing and taking lenses of 75 mm. focal length. Focuses from 4 ft. to infinity by lever at front of camera, which is convenient for one-hand operation. *Blitz I* self-cocking shutter with rated speeds of 1/25, 1/50, 1/100 sec., and bulb, flash synchronized. No parallax correction. Quality of lens, fair, considering the low price. "Manual" film positioning (see text). Shutter speeds were approximately 40% slow at 1/25 and 1/50 sec. Considering its very low price, the *Flektar* is considered a good value, particularly for those not interested in making big enlargements. **1**

Off the Editor's Chest

(Continued from page 2)

cult to return a shipment of sea food or fruit that is unsatisfactory; hence purchases of this nature are something of a gamble.

In the gift and gadget field, some of the established firms are: Daniel Low's (Salem, Mass.), Robert W. Kellog Co. (Springfield, Mass.), Miles Kimball Co. (Kimball Bldg., Oshkosh, Wis.), and Breck's of Boston (100 Breck Bldg., Boston 10).

The chances are that once you make a purchase from any one of these catalogs and your name gets on a list, you will receive, in the course of time, catalogs from many others in the field, because the lists are available for rental to users of direct mail advertising.

Phonograph records are sold by mail by several firms and "record clubs." Those who do not have an opportunity to visit well-stocked shops may be obliged to purchase records by mail, particularly if they want little-known selections or recordings put out by small companies. Some consumers, however, complain that they have trouble securing scratch-free, perfect records by mail and that it is a great nuisance mailing defective pressings back for exchange or credit. Plants and nursery stock, widely advertised over the radio and in the newspapers at certain seasons of the year, often prove disappointing and more expensive when the express charges are paid than purchases from a local nursery.

Many big department stores issue catalogs from time to time, particularly during the Christmas season, for gifts and toys. In the toy field, the de luxe catalog is put out by F. A. O. Schwartz (745 Fifth Ave., New York 22).

The advertising pages of the home magazines are filled with many advertisements of other mail-order firms, particularly during the Christmas season. The family gift shopping can often be quite successfully conducted at home at the library table with the aid of these catalogs.

There are a few general observations, however, to bear in mind. Frequently the merchandise from small mail-order firms is not sent gift-wrapped or in an individual gift box as is the custom with department stores during the Christmas season. If merchandise is unsatisfactory and is returned, refunds are sometimes slow in coming through, particularly around Christmas time, so that funds may be tied up for a period of time.

Important, too, to keep in mind in ordering gifts by mail is the matter of allowing sufficient time for an order to be processed and merchandise delivered. It isn't nearly so speedy as a rule as calling a department store by phone and having something sent out that has just been advertised in the local paper. Just a little experimentation, however, will provide a workable personal guide to the mail-order houses that treat customers with fairness and courtesy and deal in the type and quality of merchandise that suits your family.

Electric Blankets

PEOPLE who like to use an electric blanket give as one reason for their preference the fact that it puts little weight on the sleeper's body. One electric blanket provides as much warmth as several blankets of the traditional sort. Some find that the reduced weight of bedclothes and the uniform warmth under the electric blanket allows them to enjoy more restful sleep in cold weather.

In outward appearance, an electric blanket is similar to any standard wool or blended blanket. Except for the telltale power cord emerging from the foot of the electric blanket, it would be hard to distinguish between them. Internally, this similarity ends. A heating element is firmly held between the two layers of fabric of the electric blanket. This element is in parallel rows arranged lengthwise in the blanket.

A control box with a dial marked for varying amounts of heat is wired to the heating element by a connecting cord; another cord runs from the control box to a convenient 110-volt outlet. The control box contains a thermostat which is supposed to hold the blanket at a heat level selected by the user. Sewn into the blanket along with the heating element and in series with it are several thermostat units which are scattered over the warmed area. The purpose of these thermostats is not to regulate the temperature or warmth of the blanket; that is done by the control box. The thermostats are simply safety devices which should open the circuit of the heating elements in the event something should go wrong and the blanket become too hot.

There are many types or models of electric blankets. They are made to fit single or twin bed size or the double bed size; some have one control box for the entire blanket and there are so-called dual-control models with a separate control box for each half of the blanket. Either of two sleepers thus has control over the temperature of his own side of the blanket. Electric blankets are available in the conventional form or in the new contour type.

Electric sheets are also available; these have the same type of wiring as electric blankets, but are made of cotton fabric. Such sheets are about 35 percent cheaper than electric blankets, but would be less satisfactory in some respects. An electric sheet is used between the regular sheet and top cover of the bed. As with an electric blanket, it can be used to preheat the bed and as a warming cover all through the night.

The regulation of the heat in the blanket is not what the manufacturers would lead one to expect. The amount of heat present can be roughly regulated by the control box, but the temperature under the blanket will not remain constant when the room temperature changes. CR's tests showed that with all the blankets there was a drop in temperature underneath as the room temperature went down.

Care of electric blankets

Because of their construction, electric blankets require special care and handling. Pins should never be inserted into the blanket for there is danger of damaging the heating element. The blanket should be tucked in only at the foot or at a part of the blanket where no wires can be felt inside. It should not be covered with anything, and folds should not be allowed to occur as a blanket may overheat where there are folds. If these hot areas happen not to include one of the overload thermostats in the blanket, a fire could result or the user be burned. For these reasons, an electric blanket should never be used on infants, or on ill, injured, or unconscious persons who may be insensitive to heat.

An electric blanket can be laundered, but this is best done by hand. A blanket should not be put through a wringer, but rather squeezed gently by hand. If an automatic washer is used, it will be necessary to control its operation manually, and spin cycles should be eliminated. Never dry clean an electric blanket, or try to do a spotting job with a dry-cleaning

Control boxes for the six electric blankets. From left to right: Sunbeam, Northern, Westinghouse, Philco, General Electric, and Universal.

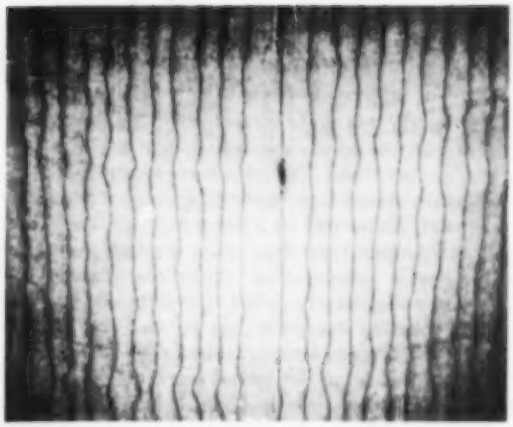
solvent, as some of the solvents may damage the insulation on the heater wires. Do not use moth balls or flakes in storing a blanket; these, too, may have an adverse effect on the wiring. (It is believed that this may be true also of paradichlorobenzene or "para.") These rules are generally applicable, but in all cases the purchaser of an electric blanket should read the manufacturer's instructions carefully and follow them, and see that others in the family are told about them. The instruction leaflets supplied with the test blankets all had satisfactory operating instructions. All gave necessary steps for care of the blankets. The cost of operating an electric blanket for 8 hours a day at average rates for electricity will run to about a dollar a month.

Servicing of electric blankets

Past experiences with electric blanket service have been rather poor. Blanket construction is such that the average appliance serviceman is not equipped to open a blanket and properly resew or replace bindings or to reseal the thermostats. In view of the potential fire and shock hazards involved, CR considers it necessary to replace immediately or have overhauled at the factory any electric blanket which appears to have any electrical defect. No blanket should be used until it is repaired if there is any indication of malfunctioning, local overheating, or other fault. All blankets tested had instructions for obtaining repairs, either from the manufacturer or from authorized service stations. The *Philco* and the *Universal* had 2-year warranties, and the *Northern*, *GE*, and *Westinghouse* had 1-year warranties. The *Sunbeam* had a card for registration of the guarantee, but failed to indicate any time limit or to state what the "guarantee" referred to on the card provided for or how it protected the purchaser. Electric blanket service may be very slow, and the charge may run to a substantial sum of money.

Testing electric blankets

The electric blanket is one of the most difficult of electrical appliances to test for performance. There are no standard or even tentatively adopted test methods on this appliance, so far as is known to CR. Tests and standards for electrical safety have been set up by the Underwriters' Laboratories, but since that organization is primarily interested in fire hazards resulting from faults in electrical design and construction of electric apparatus and devices, *UL* are not concerned with how well a device operates, from the consumers' standpoint. They have established no standards or specifications for performance. The fact that the body of the person



Photograph shows placement of heater wires in a typical electric blanket. The darker spot at the center of the picture is one of the protective thermostats.

sleeping under the blanket adds to the heat present is one of the factors considered in establishing test methods. In past years investigators have attempted in various ways to include this factor. However, results and interpretation of the different tests were not sufficiently conclusive, and no generally accepted method of test became available as a result of such experiments. In view of previous tests in which it was determined that electric blankets will actually give sleeping comfort in typical cold bedrooms, CR decided to use other methods for its study.

Standard tests for electrical safety were given all blankets. They were checked for leakage current in new condition, as received. The blankets were then checked for high-voltage breakdown. To do this they were immersed one at a time in a brine solution in a metal container. After the blanket was in the brine solution for 30 minutes, an a-c potential of 1230 volts was connected between the element of the blanket and the metal container for one minute. Leakage current from the blanket at 118 volts into the brine solution was also measured. The blankets were then laundered by hand and subjected to operation tests; thereafter the electrical tests were repeated. Operation of the thermostats which protect the blanket against overheating was checked by measuring the temperature at the center of four folds of the blanket, with the blanket sandwiched between heavy cloth pads. All six of the blankets passed this test. The coolest—*Westinghouse*—reached 132°; the warmest reached a temperature of 155°F. This would be uncomfortable, but is well below

the point where a fire might result. In past years there have been many reports of fires started by overheated electric blankets as a result of unknown or unsuspected defects.

Next the blankets were spread out on a full-size mattress in a room which had a controlled low temperature. A temperature-sensitive electrical resistance unit was placed under the blanket and connected to a recording device. The room temperature was then varied, and the changes in temperature under the blanket recorded. As already noted, the data showed the under-blanket temperatures to vary on all the blankets as room temperature varied. Probably each person must determine for himself whether he will find an electric blanket comfortable for sleeping. Many who have used them find them quite satisfactory. A few persons find them unsatisfactory, for a variety of reasons. It is believed that all of the blankets tested will serve reasonably well to keep a sleeper warm. In most cases, the controls will have to be reset when the room temperature either rises or falls by a substantial number of degrees during the night. It is because of this condition of imperfect temperature control beneath the blanket that none of the blankets received a rating higher than *B. Intermediate*.

Measurements were also made of power consumption, time-on and time-off, and number of off-on cycles. All blankets were double bed size models, with a single, not dual, control, and operated on 115 volts a.c. only. The *General Electric* was the only one of the so-called contour type of electric blanket, which has the advantage of fitting snugly over the lower end of the mattress. This design keeps the blanket from sliding or slipping off the bed during the night, as might happen with the electric blankets not fitted to the mattress, particularly with two sleepers in a bed. All blankets carried the *UL* label, indicating that they have been checked for design showing a satisfactory degree of probability that they would not cause a fire. With one exception, the rated maximum watts were sufficiently close to the actual watts as measured. In the one case (*General Electric*), the measured watts are given in parentheses.

B. Intermediate

Northern, Model 991 (Northern Electric Co., Chicago) $39.95. Labeled nylon-rayon-cotton. Size, 72 in. wide x 84 in. long. Five colors available. Weight, 4 lb. 14 oz. Maximum watts input, 180. Control dial marked: L, 1, 2, 3, 4, 5, 6, 7, 8, 9, H. Had separate on-off switch. Had indicator light. Maximum leakage current under test conditions explained in the text, 0.8 ma. (satisfactory). Dimensions of heated area, 54 in. x 68 in. **2**

Philco Comfortemp, Model 100 (Philco Corp., Beacon, N.Y.) $37.95. Labeled rayon, nylon, cotton. Size, 70 in. wide x 84 in. long. Colors available: green, rose, coral, blue, and yellow. Weight, 4 lb. 14 oz. Maximum watts input, 140. Control dial marked: Off, 1, 2, 3, 4, 5, 6, 7, 8, 9, Hi. (On-off switch is not separate but is built into the heat control lever.) Had indicator light. Leakage current, 1 ma. (satisfactory). Dimensions of heated area, 54 in. x 66 in. **2**

Sunbeam, Model SDB (Sunbeam Corp., 5600 Roosevelt Rd., Chicago 50) $34.95. Labeled 25% wool, 50% rayon, 25% cotton. Size, 73 in. wide x 85 in. long. Colors available: blue, yellow, rose, green. Weight, 4 lb. 10 oz. Maximum watts input, 180. Control dial marked: Low, 1, 2, 3, 4, 5, 6, 7, 8, 9, High. Had indicator light and separate on-off switch. Leakage current, 0.9 ma. (satisfactory). Dimensions of heated area, 54 in. x 68 in. **2**

Universal, Model EA-C7613 (Landers, Frary & Clark, New Britain, Conn.) $38.95. Labeled 25% wool, 25% cotton, 50% rayon. Size, 72 in. wide x 86 in. long. Colors available: green, blue, rose, tan. Weight, 5 lb. Maximum watts input, 170. Control dial marked: 1, 2, 3, 4, 5, 6, 7, 8, 9. Had indicator light and separate on-off switch. Leakage current, 0.8 ma. (satisfactory). Dimensions of heated area, 55 in. x 66 in. ¶*Model 7661*, at $34.95, is thought to be similar. **2**

Westinghouse, Model B-551 (Westinghouse Electric Corp., Mansfield, Ohio) $39.95. Labeled nylon blend. Size, 73 in. wide x 85 in. long. Colors available: pink, blue, green. Weight, 5 lb. 3 oz. Maximum watts input, 180. Control dial marked: Low, 1, 3, 5, 7, 9, High. Had indicator light and separate on-off switch. Leakage current, 1.0 ma. (satisfactory). Dimensions of heated area, 55 in. x 69 in. **2**

* * *

The following blanket was considered somewhat less desirable from the electrical standpoint than the others tested, on account of the failure of one sample in the high-voltage (electrical breakdown) test. Its leakage current also measured somewhat higher than other blankets in various tests for this property. On the other hand, its contour design gave it a considerable practical advantage in use.

General Electric Sleep-Guard, Model PB16B1 (General Electric Co., Bridgeport, Conn.) $32.95. Contour blanket, labeled rayon-cotton-nylon. One sample, with same model number, was labeled rayon, cotton, wool. Size, 74 in. wide x 82 in. long. Colors available: red, rose pink, turquoise, blue, gold, green. Weight, 4 lb. 10 oz. Maximum watts input, 190 (223). Control dial marked: Lo, 2, 3, 4, 5, 6, 7, 8, Hi. Had indicator light and separate on-off switch. Leakage current, 1.1 ma. (satisfactory). One sample failed in high-voltage breakdown test. Dimensions of heated area, 56 in. x 66 in. **2**

Cold Weather—Time to Check Your Storage Battery

THE STORAGE BATTERY that supplies current to the starter and the many accessories of an automobile rarely fails suddenly and without warning if the driver or his serviceman has checked the battery properly from time to time, with use of a hydrometer. Normally batteries of the various grades may be expected to last for at least as long as their guarantee periods. The extent to which deterioration has progressed or the imminence of failure can be determined with testing equipment available at many service stations.

The car owner himself can usually expect trouble when one (or perhaps two) of the cells in the battery begins to require more than the normal amount of water. For this reason, it is a good idea to check the water level frequently. In some cars, this is difficult to do, but regular checking may save a battery from early failure, and the owner from the inconvenience of an engine that fails to start at a critical time.

Better automobile batteries are available at the present time than were offered several years back. The greater durability of the present-day battery is all the more surprising in view of the increased demands made by the new automobiles. Not only the starter, lights, and horn, but the heater, radio, electric clock, defroster, windshield wipers, cigarette lighter, and other gadgets put a heavy load on the battery. All of these demands make it important to make a battery check at regular intervals or have the serviceman do it for you. The common practice of a serviceman's looking to see that the liquid level in each cell is correct is not an adequate check of a battery at all.

Cold weather reduces the battery capacity and causes a heavy demand for current, to turn over a stiff, cold engine. Using motor oils of lower viscosity which put less of a drag on the engine helps to reduce the drain on the battery, increases battery life, and makes winter starting more certain. Depressing the clutch when engaging the starter, on cars with non-automatic transmissions, disengages the transmission gears, and lessens the starter load. It is helpful, too, to shut off all other electrical equipment, including the lights (unless required for safety), before pressing the starter button. Follow the directions given in the car's instruction book for the correct technique for starting the motor, particularly in cold weather. Whatever you do, avoid operating the starter too long at a time. Give the battery a minute or two to recuperate and try again if the engine doesn't start on the first try or two.

Batteries are fairly simple, as modern electrical equipment goes, but determining which will give the best performance in an automobile is a job that requires expert testing. For those, however, who wish some general rule to follow in making their purchases on an economy basis, a little study of the guarantee offered by the various companies will provide a good indication of the probable battery cost per month. The guarantees of 6-volt batteries of a number of well-known brands, including those of the two big mail-order companies, have been analyzed, and prices and costs per month compared.

A guarantee is primarily your assurance that during the period covered the battery will cost you no more than, say, 60 cents per month. If the battery continues to function beyond the expiration date, it will cost you less, of course. The cost per month will vary from brand to brand and with a given make with differing guarantee periods, as can be seen in the column in the table headed "Maximum cost per month to the user." Here we have a spread from 37 cents to $1.33 per month. The lower figures of 37 cents and 38 cents, which characterize only a very few makes, are brought about by a relatively long guarantee period of 48 months, in each case. In general, batteries with long guarantees will cost less to use, unless, of course, the battery is likely to be traded off with the car, well before the expiration of the guarantee.

No so-called "lifetime" batteries were included in the table since for various reasons it is not practicable to calculate their cost on a per-month basis. At least one "lifetime" battery is covered by a guarantee only as long as the battery remains in the car for which it was originally bought.

Some manufacturers offer the new battery owner an unconditional guarantee for the first 90 days or even up to the first 12 months, during which time the manufacturer will replace the battery, should it fail, with a new one at no cost to the owner. However, when the battery fails after this period, but prior to the expiration of the regular guarantee, the owner will be ex-

Brand	Size of case	No. of plates	Ampere-hours, 20-hour rate	Price to consumer, $	Unconditional guarantee, months	Total number of months guaranteed	Maximum cost per month to the user, $
39- and 45-Plate Batteries							
Allstate* (*Sears Roebuck*)	1	39	80	9.99	None	12	0.83
	1	45	100	13.15	None	24	0.55
Atlas (*Esso Standard Oil Co.*)	1	45	100	16.95	3	24	0.71
Blue Blaze (*Blue Blaze Battery Co.*)	—	—	—	24.95	None	42	0.59
Cadet† (*Pep Boys*)							
Sturdee	1	39	80	9.85	None	12	0.82
	2L	45	90	10.95	None	12	0.91
	2E	45	90	12.45	None	12	1.04
Heavy Duty	1	45	90	12.45	6	24	0.52
	—	45	100	13.95	6	24	0.58
Delco (*Delco-Remy*)	1	39	70	12.95	3††	12	1.08
	1	39	85	15.95	3††	15	1.06
	1	45	90	17.60	3††	15	1.17
	1	45	100	19.95	3††	21	0.95
	2L	39	70	12.95	3††	12	1.08
	2L	45	90	17.95	3††	18	1.00
	2	45	90	15.95	3††	12	1.33
	2E	39	90	15.95	3††	12	1.33
	2E	45	100	19.95	3††	21	0.95
Exide (*Electric Storage Battery Co.*)							
Startex	1	39	80	13.95	3††	18	0.77
	2L	39	80	13.95	3††	18	0.78
	2E	39	80	15.45	3††	18	0.86
	2	39	80	15.45	3††	18	0.86
Sure-Start	1	45	100	19.95	3††	24	0.83
	2L	45	95	19.95	3††	24	0.83
	2E	45	100	20.45	3††	24	0.85
	2	45	100	20.45	3††	24	0.85
	2F	45	100	20.45	3††	24	0.85
Firestone (*The Firestone Tire & Rubber Co.*)							
LD151	—	45	100	21.50	3	36	0.60
S131	—	39	80	17.50	3	24	0.73
S152L	—	45	90	19.25	3	24	0.80
Goodyear (*The Goodyear Tire & Rubber Co.*)							
G113	—	39	80	14.35	3	12	1.20
A115	—	45	100	19.95	3	21	0.95
G215	—	45	90	15.40	3	18	0.86
Montgomery Ward*							
Commander	1	39	80	9.75	None	12	0.81
Winter King Standard	1	45	100	13.15	None	24	0.55
	2F	45	100	12.95	None	24	0.54
51-Plate Batteries							
Allstate* (*Sears Roebuck*)	1	51	120	18.45	None	48	0.38
	1	51	110	16.85	None	36	0.47
	2L	51	100	13.15	None	24	0.55
	2	51	110	14.15	None	24	0.59
	2E	51	110	14.85	None	24	0.62
Atlas (*Esso Standard Oil Co.*)	1	51	120	21.50	3	36	0.60
Cadet† (*Pep Boys*)							
Heavy Duty	2L	51	100	13.95	6	24	0.58
	2	51	115	14.95	6	24	0.62
	2E	51	115	15.95	6	24	0.66
All Weather	1	51	100	17.15	9	36	0.48
	2	51	122	18.45	9	36	0.51
Hi-Level	1	51	115-120	18.45	12	48	0.38

Brand	Size of case	No. of plates	Ampere-hours, 20-hour rate	Price to consumer, $	Unconditional guarantee, months	Total number of months guaranteed	Maximum cost per month to the user, $
Delco (*Delco-Remy*)	1	51	115	23.95	3††	24	1.00
	—	51	115	26.55	3††	30	0.88
	2L	51	100	20.95	3††	21	1.00
	2	51	115	22.95	3††	21	1.09
	2E	51	120	23.95	3††	21	1.14
Exide (*Electric Storage Battery Co.*)							
Ultra Start	1	51	115	31.95	3††	48	0.67
Hycap XD	1	51	105	24.45	3††	36	0.68
	2L	51	105	24.95	3††	36	0.69
	2	51	115	27.75	3††	36	0.77
	2E	51	115	27.75	3††	36	0.77
Sure-Start 90	2N	51	90	19.95	3††	24	0.83
Firestone (*The Firestone Tire & Rubber Co.*)							
SP171	—	51	110	28.50	3	48	0.59
LD172L	—	51	100	21.50	3	36	0.60
Montgomery Ward*							
Winter King Standard	2L	51	100	13.15	None	24	0.55
	2	51	110	14.25	None	24	0.59
	2E	51	115	14.75	None	24	0.61
Winter King Heavy Service	1	51	110	16.15	None	36	0.45
57-Plate Batteries							
Allstate* (*Sears Roebuck*)	2L	57	110	16.75	None	36	0.47
	2L	57	115	18.45	None	48	0.38
	2	57	130	18.45	None	36	0.51
	2	57	135	19.95	None	48	0.42
	2E	57	130	18.25	None	36	0.51
	2E	57	135	20.45	None	48	0.43
	2N	57	110	13.95	None	24	0.58
	3	57	130	16.45	None	24	0.69
	3	57	135	19.45	None	24	0.81
Cadet† (*Pep Boys*)							
All Weather	2E	57	115	19.45	9	36	0.54
Hi-Level	2L	57	115	17.95	12	48	0.37
	2	57	125-135	20.95	12	48	0.44
	2E	57	125-135	21.45	12	48	0.45
Delco (*Delco-Remy*)	2	57	125	26.95	3††	24	1.12
	2	57	125	29.95	3††	30	1.00
	2E	57	130	26.95	3††	24	1.12
	2E	57	130	29.95	3††	30	1.00
Exide (*Electric Storage Battery Co.*)							
Ultra Start	2L	57	115	32.45	3††	48	0.68
	2	57	125	36.45	3††	48	0.76
	2E	57	125	36.45	3††	48	0.76
	2F	57	125	36.45	3††	48	0.76
Sure-Start 100	2N	57	100	22.45	3††	24	0.94
	3	57	125	27.45	3††	24	1.15
Firestone (*The Firestone Tire & Rubber Co.*)							
SP192L	—	57	110	28.50	3	48	0.59
SP192	—	57	125	30.95	3	48	0.64
Goodyear (*The Goodyear Tire & Rubber Co.*)							
A321N	—	57	100	24.80	3	24	1.03
Y119	—	57	125	29.95	3	36	0.83
Montgomery Ward*							
Winter King Standard	2N	57	100	13.45	None	24	0.56
Winter King Heavy Service	2L	57	110	16.15	None	36	0.45
	2	57	120	17.85	None	36	0.50
Winter King Super Power	1	57	125	18.45	None	48	0.38

*Prices have been increased by $1.50, estimated average charge for shipping the battery by freight.
†Cadet's list prices have been increased by $1.50, estimated average junk value of old battery required as trade-in to permit purchaser to buy at the advertised price.
††Warranty of 90 days or 4000 miles, whichever occurs first.

THOR LIFETIME GUARANTEE

THE THOR LIFETIME BATTERY is guaranteed against structural failure for the life of the automobile in which it was installed. Structural failure being, warped plates, breakdown of separators or any other structural failure which causes the battery to become inoperative by aborted cells.

Guarantee does not cover, cracked or broken cases, freezing, overcharging, or sulfated by lack of use for a period of 3 months or more. Does not cover batteries in which additives have been used. Does not cover discharged or maltreated batteries, nor batteries with broken or loosened posts.

GUARANTEE IS NOT TRANSFERABLE

Owner _____ Date Purchased _____

Make Of Auto _____ AUTO STORE

Body _____

Year _____

A battery bought with the "lifetime" guarantee at the left is covered against structural failure (such as warped plates, breakdown of separators, battery inoperative by shorted cells) "for the life of the automobile in which it was installed." There is no indication what the maker or distributor will do under the guarantee in the event the battery fails. This guarantee is against structural failure only and does not cover a "discharged" battery.

Every CADET BATTERY is guaranteed to deliver trouble-free service for the period specified in normal passenger car use, and is further UNCONDITIONALLY GUARANTEED and will be replaced FREE, if defective within the period of purchase stated below.

TYPE	GUARANTEED	UNCONDITIONALLY GUARANTEED
CADET "48" HI-LEVEL	48 MONTHS	12 MONTHS
CADET "36"	36 MONTHS	9 MONTHS
CADET HEAVY DUTY	24 MONTHS	6 MONTHS

If any CADET BATTERY SHOULD FAIL to give service, for any reason whatsoever, within that period, THE PEP BOYS will repair it free of charge, or replace it with a NEW CADET battery, same size and kind, charging only for the service received.

If used in truck or commercial service, guarantee periods are reduced one half. No time guarantee is made if used on vehicles without proper charging equipment.

As contrasted with the "lifetime" guarantee, this one offers the consumer a replacement at no charge if the battery fails within a certain time period and thereafter at a charge of a certain amount per month for each month of service received until the date at which the guarantee runs out.

pected to pay for the total number of months of service received from the battery, including those months covered by the unconditional guarantee. The practice of allowing the usual $1 or $1.50 for an old battery as a trade-in is not carried out in cases where the battery fails before the guarantee runs out. The credit allowed is calculated entirely on the number of months remaining on the guarantee with no allowance for the old battery, which, however, must be turned in.

It is interesting to note that the initial price of a battery is not so important as the cost per month and the convenience of having a battery with a longer life. Various batteries are available for which the makers, usually relatively unknown firms, claim a phenomenally long life. Such batteries are not regarded as meriting serious consideration at the present time.

Just a word about guarantee forms. Be sure that the form is carefully filled out at the time the purchase is made and that you keep it in the glove compartment. Getting an adjustment on the guarantee is more satisfactorily handled when this card is readily available, although in some cases the date of purchase will appear on the battery itself. It is also useful to keep the sales check attached to the card in order that there will be no question about the price paid for the battery.

* * *

The approximate battery dimensions which correspond to the case-size figures listed in column 1 of the table on pages 22 and 23 are:

Size of case	Height	Width	Length
1	8½	7	9
2L	7¾	7	10¼
2	8½	7	10¼
2E	8¾	4	19½
2F	9	7¼	10½
2N	9	5½	10
3	9	7	11¾

Automatic Toasters

MOST people probably consider dependable operation the most important single asset of a toaster. When set for "medium," it should make medium toast and continue to do so without requiring attention or adjustment. It should continue to function reliably and consistently for years, with reasonable care in use.

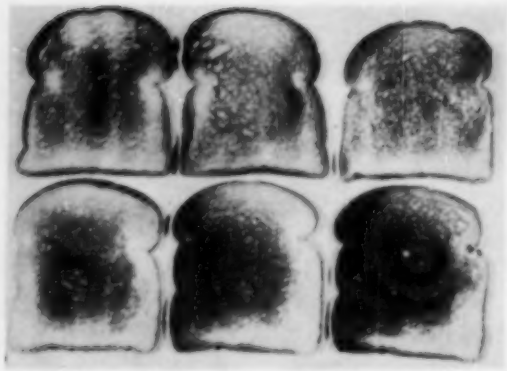
Most toasters now have provision for inspection of the toast for "doneness" when desired. Designers, too, now recognize the need for a toast-slot which accommodates a variety of sizes of slices of bread, and stress particularly the ability of a toaster to raise a small slice sufficiently high so that one does not need to use a fork to remove it from the slot. Two manufacturers, Camfield and Dormeyer, have recently announced (too late for their appliances to be included in CR's tests) models in which both sides of the electric power line in the toaster are opened when the toast "pops up." On all toasters in the present test, the switching mechanism was such that it interrupted the circuit on only one side of the line.

The feature announced by Camfield and Dormeyer is a desirable one and well worth inclusion in any future toaster designs. On toasters in which only one side of the line is disconnected, one can easily receive a bad shock when the toaster is plugged in, but not operating, by touching the heating element with a knife or fork in dislodging an entrapped piece of toast. In view of the well-known curiosity of young children and their tendency to handle and explore any utensil that comes to hand, the presence of live elements in this way is a distinct hazard. Any toaster should be disconnected at the socket before any manipulations are carried out to remove a piece of toast that may be trapped or stuck in the slot, and small children should be trained not to handle or touch any toaster or other appliance.

Moreover, the toaster presents an additional hazard in that the shell becomes very hot. The exterior surfaces of the toasters tested got too hot to touch, and some parts reached high temperatures of the order of 200 degrees, as was found in toasters tested previously.

One may easily receive a burn if the metal shell is touched at certain parts, particularly after four or five slices of toast have been made. Table top temperatures beneath the toasters tested were satisfactorily low. All the toasters tested had provision for catching the crumbs which accumulate in the bottom and provided means for their removal. Failure to remove crumbs is often a cause of poor functioning of the toaster mechanism. Homemakers would be well advised to clean the crumb receiver of their toaster each week, in order to prolong the life of the toaster and reduce the cost for servicing.

Some manufacturers are now stressing the speed with which their appliance operates. While many persons prefer toast which is browned quickly so that the bread remains soft on the inside, many others prefer crunchy, or crisp, toast which has been made more slowly. Speed of toasting is mentioned in the listings



The 3 slices pictured at the top show how a good toaster will produce relatively even toast from pair to pair (the 3 sides shown were all made in the same toaster slot, on 3 consecutive runs). The 3 slices shown at the bottom were made—with the same setting—on a less satisfactory toaster which tended to produce progressively darker and somewhat uneven toast under the same conditions of operation.

so that those with a distinct preference for one or the other kind of toast may be sure of obtaining a toaster which will tend to produce the toast they prefer.

CR's tests

CR's tests of electric toasters include an engineering examination during which data are taken covering the over-all dimensions, size of toast slots, size of slices accommodated, stability of toaster, power consumption, method of operation of toaster, and special features present in the design. Electrical tests are also made to determine the relative safety of the electrical insulation and the degree of shock hazard under various conditions of use as indicated by the leakage or stray current that passes into parts that are supposed not to carry any current, particularly the shell of the toaster. Only those instances where an electrical fault was present are noted in the listings. In the toasting evaluation tests, more than 2000 slices of toast were made in the eight toasters included, using both fresh bread (24 hours old) and bread from three days to a week old. During these tests, each toaster was subjected to 125 or more separate toasting cycles at various settings. The toast produced was judged for evenness of toasting and reproducibility of toasting from cycle to cycle. In addition, temperatures of the handles, shell, and controls were noted, as well as the temperature of the table top beneath the toaster.

In the listings that follow, all toasters were for operation on alternating current only except the *General Electric T82* which was for a.c. or d.c. All toasters carried marks indicating listing by the Underwriters, evidence that they had been produced under the Follow-Up Program of Underwriters' Laboratories, Inc. Such marking is taken by many consumers and sales persons as indicating that the toasters have passed tests for performance, durability, etc. Actually the Underwriters' markings do not imply this or indicate that listed toasters are necessarily equivalent in quality or serviceability.

Rated watts input are followed in parentheses by the measured watts input whenever there is a significant deviation of the measured watts from the ratings. The figure giving the minimum height of slice accommodated allows for ½ inch projection above the top of the toaster for ease in removal. All toasters handled two slices of toast at a time except the *Toastmaster 1C4* which handled three. Each toaster operated silently except the *Westinghouse* which made an unobtrusive clock-timer ticking noise.

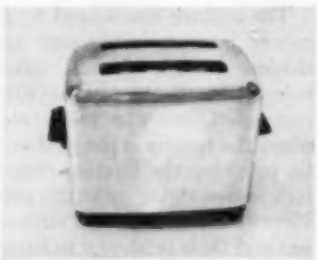
None of the toasters in CR's latest test received an *A* rating, since none was satisfactory in all respects, particularly as to uniformity and consistency of toasting.

B. Intermediate

Kenmore, Cat. No. 6342 (Sears, Roebuck & Co., Chicago) $14.50, plus postage.

Kenmore—Sears' Cat. No. 6342

Montgomery Ward's Cat. No. 2297



Proctor Model 1478

Description: For a-c operation only. Watts input, 900. Relatively light in weight, 3.4 lb. Over-all dimensions: length, 8¾ in.; width, 5¼ in.; height, 6⅜ in. Dimensions of toast slots: length, 5 in.; width, ¾ in.; depth, 4⅜ in. Minimum height of toast slice accommodated, 3 in. Crumb receiver was easily opened and readily cleaned. Temperature of plastic handle and controls was satisfactorily low during operation, but user could accidentally touch hot shell of appliance when operating the toast control dial.

Performance: Toasting was of average uniformity over surface of slices. At medium setting, one side of each slice was toasted significantly more than the other. The range of adjustment from light to dark was satisfactory. Degree of browning was fairly even from one pair of slices to the next at low, medium, and high settings. Speed of toasting, very slow. **1**

Montgomery Ward's Cat. No. 2297B (Montgomery Ward & Co., Baltimore) $14.95, plus postage.

Description: Watts input, 1060. Weight, 4.6 lb., average. Size, 11 in. x 6¼ in. x 7 in. Toast slots, 5 in. x 1 in. x 4¾ in. Minimum height of slice, 2⅝ in. Crumb receiver was readily opened and cleaned. Plastic controls which served as handles were satisfactorily cool, but the user might accidentally touch the hot metal shell of the toaster when using them. Toast could be lowered by operating a handle at either end of toaster, a desirable feature. "Keep-warm" feature considered of minor importance, since toast left in any automatic toaster will stay warm for a sufficient length of time to satisfy most users.

Performance: Toasting was somewhat above average in uniformity over surface, but there was a tendency to toast more on one surface of the slice than the other. Range from light to dark, good. Browning, fairly even from one pair of slices to the next. Speed of toasting, fast. Sample marked *2297A* had high shock hazard (leakage current over 10 ma.), but second sample (*2297B*) was satisfactory. Did not have electrical design defect reported under *Knapp-Monarch 22-503.* **1**

Proctor Color Minder, Model 1478 (Proctor Electric Co., Philadelphia 40) $15.95.

Westinghouse Cat. No. TO-5421

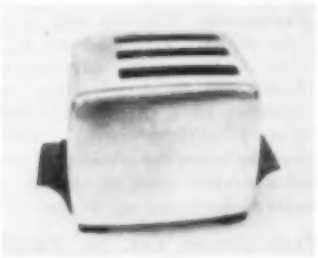
Knapp-Monarch Cat. No. 22-503

Description: Watts input, 1050 (1080). Weight, 3.9 lb., relatively light. Size, 9⅞ in. x 5¾ in. x 7¼ in. Toast slots, 5⅛ in. x ⅞ in. x 4¾ in. Minimum height, 2⅞ in. Crumb receiver easily opened and cleaned. Plastic handles satisfactorily cool, but the toast control, a strip of metal, became too hot to touch during tests. User's fingers might readily touch the hot shell of the toaster when moving the toast control dial. A good feature was the provision of an adjusting screw at the bottom of the toaster to permit the user to change the range of toasting color provided. Claim that cold toast could be reheated with little, if any, change in color was not fully justified—since additional toasting did take place.

Performance: Toasting was of average uniformity over the surface of slices, with a slight tendency to undertoast a vertical strip at the center of the toast. Range from light to dark setting, good. Degree of browning was fairly uniform for each pair of slices with a tendency for later pairs to be darker. Speed of toasting, slow. **1**

General Electric Cat. No. T82

Universal Model 2855



Toastmaster Model 1C4

General Electric, Cat. No. T82 (General Electric Co., Bridgeport 2, Conn.) $19.95.

Description: Watts input, 1150 (1100). Weight, 4.7 lb., average. Size, 11¾ in. x 6⅜ in. x 7 in. Toast slots, 5 in. x 1 in. x 5 in. Minimum height, 2½ in. Crumb receiver, easily removed and cleaned. Metal edges of slots in receiver were sharp, which is undesirable. Plastic controls and handles were sufficiently cool, and user was shielded from hot shell of toaster in moving the toast control.

Performance: Toasting was of average uniformity over the surfaces of slices, with some tendency to toast more at the center than at the edges. The degree of browning was fairly uniform for each pair of slices, with a tendency for later pairs to be lighter (at both light and medium settings). Range of adjustment, good. Speed of toasting, fast. **2**

Universal Toastamagic, Model 2855 (Landers, Frary & Clark, New Britain, Conn.) $19.95.

Description: Watts input, 1050 (1070). Weight, 4.4 lb., average. Size, 10⅜ in. x 5½ in. x 7½ in. Toast slots, 5¼ in. x ⅞ in. x 4¾ in. Minimum height, 2¾ in. Crumb receiver, easily opened and cleaned. Plastic handle and controls satisfactorily cool, but user could accidentally touch the hot shell when operating toast control dial. For other comments regarding features of operation, see "Description" section under listing of *Proctor 1478*, which utilized an almost identical thermostat and associated internal mechanism.

Performance: Toasting was of average uniformity over the surfaces of slices, but one side of the surface was slightly darker than the other. Range from light to dark setting, satisfactory. Degree of browning was fairly satisfactory, with a tendency for successive slices of toast to be darker (at all 3 settings). Speed of toasting, very fast. **2**

Toastmaster, Model 1C4 (McGraw Electric Co., Elgin, Ill.) $39.50.

Description: 3-slice capacity. Watts input, 1380 (1350). Weight, 5.6 lb., relatively heavy. Size, 11½ in. x 7 in. x 7⅜ in. Toast slots, 5 in. x ⅞ in. x 4¾ in. Minimum height, 3 in. Hinged crumb receiver, easy to open and clean. The plastic handles were satisfactorily cool. Toast control knob was so positioned that the user's fingers might be burned on the hot toaster shell. The motor-operated "lower" and "raise" feature functioned satisfactorily.

Performance: Toasting was of average uniformity over surface, with tendency to dark areas, indicative of "hot-spots" in heating element. Range from light to dark setting, satisfactory. Slight tendency for toast to darken with successive operations at medium setting. Noticeable lack of uniformity when the 6 surfaces produced in one cycle of operation were compared. Speed of toasting, very slow. **3**

Westinghouse, Cat. No. TO-5421 (Westinghouse Electric Corp., Mansfield, Ohio) $21.95.

Description: Watts input, 1320 (1420). Weight, 4.9 lb., average. Size, 10⅜ in. x 5½ in. x 7¼ in. Toast slots, 5¼ in. x ⅞ in. x 5 in. Minimum height, 2⅝ in. Crumb receiver was somewhat difficult to open and close, but was easily cleaned. Handles were well placed. Controls and handles well designed to keep user's fingers from touching the hot metal shell of the toaster.

Performance: Toasting was slightly above average in uniformity of browning over surface of slices. Range from light to dark setting, somewhat limited. Degree of browning was fairly consistent in succeeding pairs of slices at low and medium setting, with a tendency toward lighter toast in later slices at the dark setting. Speed of toasting, slow. The timing mechanism failed to trip the carriage release several times during the operation test. **3**

C. Not Recommended

Knapp-Monarch, Cat. No. 22-503 (Knapp-Monarch Co., St. Louis 16) $19.95.

Description: Watts input, 1060 (1030). Weight, 4.5 lb., average. Size, 11 in. x 6⅜ in. x 7 in. Toast slots, 5 in. x 1 in. x 4⅜ in. Minimum height, 2½ in. For additional descriptive comments, see listing of *Montgomery Ward's Cat. No. 2297B*, which was similar in most respects in regard to placement of controls and operation.

Performance: Toasting was of average uniformity over the surfaces of the slices with a slight tendency to toast darker toward one edge of slices than the other. Range from light to dark setting, good. Degree of browning, fairly consistent from pair to pair. Speed of toasting, fast. Failed final electrical tests following operation tests. A direct short circuit occurred when the carriage handle was pushed down in regular use of the toaster. This reflects a fault of design which may cause some specimens of this model to become very dangerous to the user after a period of operation. **2**

* * *

The following toasters (tested and reported on in CR's BULLETIN for April 1952) are still current models.

A. Recommended

Toastmaster, Model 1B14 (McGraw Electric Co.) $19.95. For a-c or d-c operation. **2**

Sunbeam, Model T-20 (Sunbeam Corp., Chicago) $27.50. For a-c operation only.

¶This toaster was previously rated *B. Intermediate*. Correspondence and CR's own experience during considerable use of the toaster during the past 3 yr. indicate that the design gives a satisfactorily durable appliance. **3**

B. Intermediate

Kenmore, Cat. No. 6332 (Sears, Roebuck & Co.) $17.95, plus postage. For a-c operation only. **2**

Anti-Freeze

ALTHOUGH "permanent" has by long usage become the accepted name for the glycol-base high-boiling-point type of anti-freeze, the term is misleading. This kind of anti-freeze is not at all permanent as the name implies; indeed, it should never be used for more than one season. The chemicals used to prevent rusting and corrosion lose their effectiveness. *No additive is available that the consumer can buy to restore an anti-freeze to its original condition and so render it safe for continued use in a car.*

In modern pressurized cooling systems, which subject the hot solution to a pressure of about seven pounds per square inch, there need normally be very little loss of the alcohol-type anti-freeze, and this kind is therefore about as "permanent" (for the one season that it should be used) as the glycol solution.

DuPont, which manufactures both of the most-used types, glycol-base and methyl alcohol (methanol), have reported that tests they have made, both on the road and in the laboratory, show that there was no loss or boiling away of methanol under adverse conditions of high and low temperature. The significance of these findings to the consumer is that he can save money by using methanol (wood alcohol), for methanol, to use the words of DuPont, will give *"trouble-free protection all winter long at a little more than one-third the cost" of glycol-base anti-freeze.* (For an 18-quart cooling system protected to −10°, the saving by the use of methanol should amount to about $3 per season.)

There are some exceptions calling for glycol-base anti-freeze: (1) cars in which a high temperature (180°) thermostat has been installed to increase the heat output, otherwise inadequate, of the car's heater; (2) cars driven in heavy city traffic with frequent starts and stops; and (3) mountain driving, particularly on warm days.

Ratings of the anti-freezes are mainly based on analyses published by the North Dakota State Laboratories Department.

Glycol-base anti-freeze

B. Intermediate

Allstate Permanent (Sears, Roebuck & Co.)
Atlas Perma Guard (Standard Oil Co.)
Buick Non-Evaporating (Buick Motor Div.)
Cities Service Permanent (Cities Service Oil Co.)
Cities Service Premium (Cities Service Oil Co.)
Conoco Permanent (Continental Oil Co.)
C.S.C. Permanent (Commercial Solvents Corp.)
Firestone Frigitone (Firestone Tire & Rubber Co.)
FoMoCo Permanent (Ford Motor Co.)
General Motors Permanent (General Motors Corp.)
Goodyear Permanent (Goodyear Tire & Rubber Co.)
International Harvester (International Harvester Co.)
Kaiser-Frazer Permanent (Willys Motors, Inc.)
Lincoln Permanent (Ford Motor Co.)
Mobil Permazone (Socony Vacuum Oil Co.)
MoPar Permanent (Chrysler Corp.)
One Fill Permanent (Pure Oil Co.)
Packard Permanent (Packard Motor Car Co.)
Peak Permanent (Commercial Solvents Corp.)
Phillips 66 Permanent (Phillips Petroleum Co.)
Prestone (National Carbon Co.)
Shellzone Permanent (Shell Oil Co.)
Texaco P.T. Permanent (The Texas Co.)
U.S.I. Permanent (U. S. Industrial Chemicals Co.)
Varcon Permanent (Gamble-Skogmo Inc.)
Wards Permanent (Montgomery Ward & Co.)
Zerex Permanent (E. I. du Pont de Nemours & Co.)

C. Not Recommended

Studebaker Permanent (The Studebaker Corp.)
Contained about 10% water.

Alcohol-base anti-freeze

Methanol (wood alcohol) is an excellent anti-freeze, but the liquid and its vapors are potent cumulative poisons, a fact that consumers often lose sight of. It must be handled with care. It must not be spilled on the skin, or allowed to splash into the eyes (the liquid and its vapor can do great damage to the eyes). The vapor should not be inhaled. The vapor of a strong alcohol-water mixture is flammable, and the radiator liquid level should therefore never be inspected by use of a match or other flame, or with a cigarette in the hand or mouth.

The percentage figures in the listings indicate percentage of the anti-freeze, as marketed, required in water solution to protect the cooling system to −30°F, according to the manufacturers' own dilution tables. Nearly all the anti-freezes fell in the range of 40 to 44 percent. Two which fell considerably outside this range were given a *B-Intermediate* rating on account of the extra quantity that would be required in comparison with the *A-Recommended* brands (a marked disadvantage unless they are priced about ¼ lower per gallon).

A. Recommended

Allstate Durozone (Sears, Roebuck & Co.) 41%.

Allstate Methanol (Sears, Roebuck & Co.) 40%.

Buick Methanol (Buick Motor Div.) 43%.

Conoco Methanol (Continental Oil Co.) 44%.

C.S.C. Methanol (Commercial Solvents Corp.) 41%.

Firestone Frigitol (Firestone Tire & Rubber Co.) 42%.

FoMoCo Methanol (Ford Motor Co.) 42%.

General Motors Methanol (General Motors Corp.) 42%.

Goodyear Super Methanol (Goodyear Tire & Rubber Co.) 42%.

Koldpruf Methanol (Cities Service Oil Co.) 42%.

Mercury Methanol (Ford Motor Co.) 42%.

Mobil Freezone Methanol (Socony Vacuum Oil Co.) 42%.

MoPar Methanol (Chrysler Corp.) 43%.

Norway (Commercial Solvents Corp.) 44%.

Phillips 66 Methanol (Phillips Petroleum Co.) 42%.

Pure Sure (Pure Oil Co.) 40%.

Shell Super (Shell Oil Co.) 40%.

Sinclair Methanol (Sinclair Refining Co.) 42%.

Standard Super (Standard Oil Co.) 42%.

Super Pyro (U. S. Industrial Chemicals Co.) 40%.

Trek Methanol (National Carbon Co.) 41%.

Varcon Bonded (Gamble-Skogmo Inc.) 42%.

Wards Ice-Guard (Montgomery Ward & Co.) 42%.

Zerone (E. I. du Pont de Nemours & Co.) 41%.

B. Intermediate

Blue Club (Cities Service Oil Co.) 55%. Contained about 30% water.

Varcon Methanol (Gamble-Skogmo Inc.) 56%. Contained about 35% water.

Abridged Cumulative Index of Previous 1955 Consumers' Research Bulletins

†*indicates that listings of names or brands are included.*

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Cue, Daily News (N. Y.), *The Exhibitor, Films in Review, Harrison's Report, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings* by the Protestant Motion Picture Council, *The Tablet, Time, Variety* (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Ansco, Eastman, Technicolor, Trucolor, Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	5	4	**Abbott and Costello Meet the Mummy**	*com AYC*
—	7	6	**Adventures of Sadie, The (British)**	*com A*
3	8	—	**African Lion, The**	*doc-c AYC*
—	—	3	**African Manhunt**	*mel A*
—	5	11	**Ain't Misbehavin'**	*mus-com-c A*
—	—	3	**Air Strike**	*war-dr AY*
—	8	3	**An Annapolis Story**	*war-dr-c AYC*
—	3	9	**Angela**	*mel A*
—	1	5	**Apache Ambush**	*wes A*
1	1	1	**Assignment Children**	*doc-c AYC*
—	5	1	**Bar Sinister, The**	*dr-c A*
—	3	8	**Bed, The (French)**	*com A*
—	2	12	**Bedevilled**	*mel-c A*
—	1	8	**Big Bluff, The**	*mel A*
—	3	9	**Big House, U.S.A.**	*cri-mel A*
—	2	2	**Big Knife, The**	*dr A*
—	1	4	**Big Tip Off, The**	*cri-mel A*
—	3	1	**Blood Alley**	*war-dr-c A*
—	7	1	**Break to Freedom (British)**	*war-mel A*
—	6	3	**Bring Your Smile Along**	*mus-com-c AY*
—	5	7	**Bullet for Joey, A**	*cri-mel A*
—	4	5	**Canyon Crossroads**	*mel AYC*
—	2	3	**Case of the Red Monkey (British)**	*mys-mel AYC*
—	4	9	**Cell 2455, Death Row**	*cri-mel A*
—	5	8	**Chance Meeting (British)**	*dr A*
—	8	5	**Chicago Syndicate**	*cri-mel A*
—	—	3	**City of Shadows**	*cri-mel A*
1	7	10	**Cobweb, The**	*nov-c A*
1	9	4	**Conquest of Space**	*sci-c A*
—	3	2	**Count Three and Pray**	*dr-c A*
—	12	2	**Court Martial (British)**	*war-dr A*
—	3	9	**Creature with the Atom Brain**	*sci-mel A*
—	6	3	**Cult of the Cobra**	*mel A*
4	12	1	**Daddy Long Legs**	*mus-com-c AY*
1	7	—	**Dam Busters, The (British)**	*war-mel AY*
4	8	5	**Davy Crockett—King of the Wild Frontier**	*biog-c AYC*
—	5	3	**Day to Remember, A (British)**	*com AYC*
—	1	2	**Deep Blue Sea, The (British)**	*dr-c A*
—	2	3	**Desert Sands**	*adv-c A*
2	3	—	**Desperate Hours**	*cri-mel A*
—	1	6	**Devil Goddess**	*adv AYC*
—	1	4	**Dial Red O**	*cri-mel A*
4	10	1	**Divided Heart, The (British)**	*war-dr AYC*
—	—	3	**Don Juan's Night of Love (Italian)**	*mel A*
—	—	5	**Double Jeopardy**	*cri-mel A*
—	1	4	**Duel on the Mississippi**	*mel-c A*
—	5	2	**Eight O'Clock Walk (British)**	*cri-mel A*
—	6	10	**End of the Affair, The (British)**	*dr A*
—	3	10	**Escape to Burma**	*mel-c A*
—	10	2	**Eternal Sea, The**	*biog AYC*
—	9	4	**Far Horizons, The**	*mel-c AYC*
—	6	10	**Female on the Beach**	*dr A*
—	3	8	**Finger Man**	*cri-mel A*
—	7	12	**Five Against the House**	*cri-mel A*
—	3	2	**Five Guns West**	*mel-c A*
2	3	4	**Footsteps in the Fog**	*cri-mel-c A*
—	6	9	**Foxfire**	*dr-c A*
—	6	7	**Francis in the Navy**	*com AYC*
—	2	8	**Front Page Story (British)**	*mel A*
—	2	3	**Gentlemen Marry Brunettes**	*mus-com-c A*
—	1	5	**Girl Rush, The**	*mus-com-c A*
—	4	1	**Gran Varieta (Italian)**	*com-c A*
9	5	—	**Great Adventure, The**	*doc AYC*
2	12	—	**Green Magic**	*trav-c A*
—	1	8	**Gun that Won the West, The**	*wes-c AYC*
—	2	1	**Hamido (Egyptian)**	*mel A*
—	4	7	**Hell's Island**	*mel-c A*
—	2	3	**High Society**	*com AYC*
—	2	9	**Hiroshima (Japanese)**	*propaganda-war-dr A*
1	11	2	**House of Bamboo**	*cri-mel-c A*
—	13	3	**How to Be Very, Very Popular**	*mus-com-c A*
—	5	7	**I Am a Camera**	*dr A*
—	—	5	**I Cover the Underworld**	*cri-mel A*
—	2	3	**Illegal**	*cri-mel A*
—	3	6	**Imposter, The (Japanese)**	*dr A*
6	7	4	**Interrupted Melody**	*mus-biog-c A*
—	5	5	**It Came from Beneath the Sea**	*sci AY*
4	8	1	**It's Always Fair Weather**	*mus-com-c A*
—	3	4	**Jump Into Hell**	*war-dr A*
—	1	7	**Jungle Moon Men**	*adv AYC*
1	4	8	**Kentuckian, The**	*dr-c A*
—	1	3	**Killer's Kiss**	*mel A*
—	8	4	**King's Thief, The**	*adv-c AY*
—	1	10	**Kiss Me Deadly**	*cri-mel A*
—	1	5	**Kiss of Fire**	*adv-c A*
5	6	4	**Lady and the Tramp**	*mus-car-c AYC*
—	2	1	**Lady Godiva**	*dr-c A*

A	B	C		
3	6	8	**Land of the Pharaohs**	*dr-c A*
—	4	10	**Las Vegas Shakedown**	*mel A*
—	8	—	**Last Command, The**	*hist-dr-c AY*
—	—	3	**Lay that Rifle Down**	*mus-com AYC*
2	6	2	**Left Hand of God, The**	*war-dr-c A*
—	4	6	**Looters, The**	*cri-mel A*
—	—	3	**Lord of the Jungle**	*mel AYC*
—	2	3	**Love in the City (Italian)**	*dr A*
1	7	5	**Love is a Many Splendored Thing**	*dr-c A*
4	9	5	**Love Me or Leave Me**	*mus-biog-c A*
—	4	6	**Ma and Pa Kettle at Waikiki**	*com AYC*
—	3	4	**Mad at the World**	*soc-dr A*
1	1	3	**Maddalena (Italian)**	*dr-c A*
—	6	8	**Magnificent Matador, The**	*dr-c A*
—	2	4	**Man Alone, A**	*wes-c A*
6	9	1	**Man Called Peter, A**	*biog-c AYC*
—	5	6	**Man from Bitter Ridge, The**	*wes-c A*
4	9	6	**Man from Laramie, The**	*wes-c A*
—	10	5	**Man Who Loved Redheads, The (British)**	*com-c A*
—	1	10	**Marauders, The**	*mel-c A*
5	12	—	**Marty**	*dr A*
—	1	2	**Master Plan, The (British)**	*mys-mel A*
—	—	3	**Mau Mau**	*doc-c A*
1	4	2	**McConnell Story, The**	*war-biog-c AY*
—	1	5	**Midnight Episode (British)**	*mys-mel A*
12	4	2	**Mister Roberts**	*war-com-c A*
—	10	6	**Moonfleet**	*adv-c A*
—	—	3	**Murder in Villa Capri**	*cri-mel A*
1	7	3	**My Sister Eileen**	*mus-com-c A*
—	—	3	**Naked Amazon, The**	*trav-c A*
—	2	8	**Naked Dawn, The**	*dr-c A*
—	2	6	**Naked Heart, The (Canadian)**	*dr A*
—	3	2	**Naked Street, The**	*cri-mel A*
—	—	5	**Night Freight**	*mel A*
—	12	1	**Night Holds Terror, The**	*cri-mel A*
—	2	10	**Night of the Hunter, The**	*cri-mel A*
—	3	1	**No Way Back (German)**	*war-mel A*
4	7	9	**Not as a Stranger**	*dr A*
—	3	7	**One Desire**	*dr A*
—	—	3	**Open Secret**	*soc-mel A*
—	1	9	**Pearl of the South Pacific**	*mel-c A*
1	4	8	**Pete Kelly's Blues**	*mus-mel-c A*
1	7	4	**Phenix City Story, The**	*cri-mel A*
—	2	1	**Princess Cinderella (Italian)**	*fan AYC*
3	10	2	**Private War of Major Benson, The**	*com-c AY*
—	8	5	**Prize of Gold, A**	*war-mel-c A*
—	5	13	**Prodigal, The**	*dr-c A*
—	10	5	**Purple Mask, The**	*adv-c AYC*
—	1	2	**Race for Life, A (British)**	*mel A*
—	8	3	**Rage at Dawn**	*mel-c AYC*
—	3	—	**Rebound (British)**	*cri-mel A*
—	2	9	**Revenge of the Creature**	*mel AYC*
—	4	—	**Road to Denver, The**	*wes-c AYC*
—	4	5	**Robbers' Roost**	*mus-wes-c A*
—	11	6	**Run for Cover**	*mel-c A*
—	7	2	**Santa Fe Passage**	*wes-c AYC*
2	6	4	**Scarlet Coat, The**	*hist-dr-c A*
1	8	8	**Sea Chase, The**	*war-dr-c A*
—	6	3	**Sea Shall Not Have Them, The (British)**	*war-dr A*
—	—	9	**Seminole Uprising**	*mel-c AYC*
—	5	6	**Seven Angry Men**	*hist-dr A*
—	3	—	**Seven Cities of Gold**	*hist-dr-c AY*
2	12	3	**Seven Little Foys, The**	*biog-c A*
4	9	5	**Seven Year Itch, The**	*com-c A*
—	—	4	**Shadow of the Eagle**	*adv-c A*
—	8	—	**Sheep Has Five Legs, The (French)**	*com A*
—	7	6	**Shotgun**	*wes-c A*
2	7	8	**Shrike, The**	*dr A*
—	—	3	**Silver Star, The**	*wes AY*
—	3	—	**Skabenga**	*doc-c A*
—	9	9	**Soldier of Fortune**	*adv-c A*
—	—	14	**Son of Sinbad**	*fan-c A*
—	7	2	**Special Delivery**	*com A*
—	9	5	**Strange Lady in Town**	*dr-c A*
—	9	2	**Stranger on Horseback**	*mel-c AYC*
5	9	2	**Strategic Air Command**	*war-dr-c AYC*
2	10	5	**Summertime**	*dr-c A*
—	3	4	**Svengali (British)**	*dr-c A*
—	4	5	**Tall Man Riding**	*wes-c A*
1	3	—	**Tall Men, The**	*wes-c A*
—	1	3	**Teckman Mystery, The (British)**	*cri-mel AY*
—	1	2	**Teen-Age Crime Wave**	*soc-mel A*
—	1	2	**Terror in the Night**	*cri-mel A*
—	3	12	**That Lady (British)**	*hist-dr-c A*
1	9	4	**This Island Earth**	*sci-c AY*
—	6	5	**Three Cases of Murder (British)**	*cri-mel A*
—	4	1	**Tiger and the Flame, The (India)**	*dr-c A*
—	12	2	**Tight Spot**	*cri-dr A*
3	12	3	**To Catch a Thief**	*cri-mel-c A*
1	9	—	**To Hell and Back**	*war-dr-c AY*
—	7	4	**To Paris With Love (British)**	*com-c A*
—	3	2	**Too Young for Love (Italian)**	*dr A*
—	3	9	**Top of the World**	*dr A*
3	5	—	**Trial**	*dr A*
—	5	3	**Trouble in Store (British)**	*com AYC*
1	7	9	**Ulysses (Italian)**	*fan-c A*
—	1	2	**Umberto D (Italian)**	*dr A*
—	11	8	**Violent Saturday**	*mel-c A*
1	8	6	**Virgin Queen, The**	*hist-dr-c AY*
—	4	2	**Wakamba**	*doc-dr-c A*
—	3	2	**Warriors, The**	*adv-c AYC*
—	2	6	**Wayward Wife (Italian)**	*dr A*
1	10	6	**We're No Angels**	*com-c A*
—	5	1	**Wichita**	*wes-c AYC*
—	—	5	**Yellowneck**	*war-dr-c A*
3	6	6	**You're Never Too Young**	*mus-com-c A*

* * *

Reissues (oldtimers you may have seen before) as previously rated in the CR Bulletin indicated:

7	9	—	**Anchors Aweigh (March '46)**	*mus-com-c AYC*
3	12	2	**Asphalt Jungle, The (Dec. '50)**	*mel A*
5	7	3	**Battleground (Apr. '50)**	*war-dr A*
—	12	5	**Berlin Express (Dec. '48)**	*war-mel AY*
1	8	8	**Big Sleep, The (Apr. '47)**	*cri-mel A*
—	12	1	**Big Street, The (Jan. '43)**	*dr A*
—	4	3	**Black Eagle (Apr. '49)**	*dr A*
13	5	1	**Bringing Up Baby (Di. Dec. '38)**	*com AYC*
2	13	2	**Call Northside 777(Aug. '48)**	*doc-mel A*
1	13	4	**Champion, The (Nov. '49)**	*mel A*
—	11	5	**Every Girl Should Be Married (June '49)**	*com AY*
1	1	4	**Green Dolphin Street (Dec. '47)**	*dr AY*
3	11	4	**Home of the Brave (Jan. '50)**	*propaganda-dr A*
5	12	2	**I Remember Mama (Oct. '48)**	*com AYC*
1	5	4	**Miss Grant Takes Richmond (Apr. '50)**	*com A*
—	13	4	**Petty Girl, The (March '41)**	*com-c A*
3	11	3	**Reap the Wild Wind (Nov. '43)**	*mel-c AYC*
—	11	5	**Return of October (July '49)**	*com-c A*
4	9	4	**Saratoga Trunk (June '46)**	*mel A*
5	12	2	**She Wore A Yellow Ribbon (Apr. '50)**	*wes-mel-c AYC*
—	2	1	**Shepherd of the Hills (Feb. '42)**	*nov AY*
—	8	4	**They All Kissed the Bride (March '43)**	*com A*
5	11	—	**Twelve O'Clock High (July '50)**	*war-dr A*
—	10	2	**Where the Sidewalk Ends (Feb. '51)**	*cri-mel A*
1	14	1	**Window, The (Dec. '49)**	*mys-mel AY*
18			**Wizard of Oz (Di. March '40)**	*fan AYC*

The Consumers' Observation Post

(*Continued from page 4*)

small amount of antibiotic residues, whatever their source, might easily cause unpleasant reactions in people who were sensitive or allergic to the drug.

* * *

THE DO-IT-YOURSELF FAD can be quite expensive for the newcomer in the field. One shrewd observer has pointed out that a lot of people get sold on the idea when one of their neighbors, who may be an expert craftsman, turns out an item that he built for only $10 with his own tools. He may have acquired these tools over a considerable period of years, and the man who starts from scratch can easily spend in a short period several hundred dollars on tools to make something for $25, which he could have bought ready-built for $50, and which he may not like when it is finished, anyway. If you're not naturally a home craftsman, and one who really enjoys work in a shop, it might be well to think twice before setting one up in the basement.

* * *

TINTED AUTOMOBILE WINDSHIELDS are designed to alleviate the discomfort of glare and reduce the transmission of radiant heat. In a study made by Heinz Haber of the Institute of Transportation and Traffic Engineering, University of California, considerable evidence is presented to show that the tinted windshield contributes significantly to the hazards in night driving because it cuts the visibility, particularly of objects that are hard to distinguish; besides, it is not particularly effective as protection against glare. Mr. Haber demonstrated that the losses in visibility amounted to 9 percent to 15 percent at visibility distances ranging between 1000 and 200 feet. He found that the losses in visibility distances were greatest for targets so nearly matched to the background that they could be seen only at short distances even with clear windshields. He recommended a reconsideration of the present minimum transmittance requirement for windshields in the American Standard Safety Code and suggested that the best compromise for protection against glare appeared to be the use of dark sunglasses during the day.

* * *

COUGHING AND THROAT CLEARING early in the morning, continuing until a person arises, has been noted in a number of patients, according to a foreign medical journal. The disturbance was so severe and annoying that

the wives of two of the patients involved threatened divorce. The trouble appeared to have an allergic basis, but the sensitizing agent was difficult to discover. House dust, reaction to the climate, and a certain abnormal blood condition (eosinophilia) were held to be responsible for some cases.

* * *

THE FURNITURE TRADE has finally approved a warranty which will probably appear on many upholstered pieces of furniture after the first of the year. Furniture that carries the warranty is guaranteed to be free from defects in workmanship and construction for a period of six months from the date of purchase. The warranty, however, does not apply to permanence of color or wearing quality of the fabric. The manufacturer who uses the approved form may or may not include his name on the tag. It will be wise for consumers who purchase new furniture to keep careful check on any such warranty and make certain that they take advantage of its terms before it expires. It would appear, however, to have too short a life to be of any great usefulness, although really serious structural defects would likely show up in the six months' time.

* * *

NOT NEW BUT WORTH MENTIONING:

Lipstick mirror (Precision Tool & Die Works, New York City), 10c. Rectangular mirror measuring 1-1/2 x 5/8 inches, mounted in a yellow-finished metal frame which has two arms that fit over a lipstick case holding the mirror firmly in place. It is a great convenience for applying lipstick away from home when no large mirror is available. The device is compact and reasonably durable, although the yellow metal finish becomes discolored in the course of time. The mirror is not bulky and fits conveniently in most pocketbooks. It is found in some F. W. Woolworth stores.

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Phonograph Records

BY WALTER F. GRUENINGER

Please Note: The first symbol applies to quality of interpretation, the second to fidelity of recording.

Beethoven: *Symphony No. 3.* Chicago Symphony Orchestra under Reiner. RCA Victor LM 1899. $3.98. The celebrated "Eroica" is well performed. But it does not match the fiery Toscanini-Victor LM 1042. The recording of the Toscanini, however, falls far short of ideal. Many will prefer the Reiner disk, which is recorded at low level but is wide range and clear, despite some noticeable hall echo. A AA

Berlioz: *Symphonie Fantastique.* Boston Symphony Orchestra under Munch. RCA Victor LM 1900. $3.98. One of Berlioz's most popular works, performed by a top-notch orchestra, under their regular conductor whose mastery of this score is well known. The recording is rich, but not as transparent as the Ormandy-Columbia ML 4467, which is also well performed. My choice of the 10 recordings Schwann lists of this work simmers down to these two disks. AA AA

Brahms: *Concerto in D.* Heifetz (violin) with the Chicago Symphony Orchestra under Reiner. RCA Victor LM 1903. $3.98. The dazzling Heifetz style has been subdued here, perhaps as a concession to Brahms, but the fact remains this is a slight, slick, "American" Brahms, though the slow movement is lovely. My pressing sounds fuzzy. Milstein-Capitol P 8271 gets my vote. A B

Bruckner: *Symphony No. 7* (3 sides). Vienna Symphony Orchestra under van Otterloo and *Overture in G Minor* (1 side). Hague Philharmonic Orchestra under van Otterloo. Epic SC 6006. $9.96. The symphony remains a grandiloquent work which serves well as a starting point for the music of this north-Austrian master. It is difficult to imagine a better performance. Excellent recording of the symphony, less good of the overture composed by Bruckner in his youth. AA A

Debussy: *Images.* Concertgebouw Orchestra under van Beinum. Epic LC 3147. $4.98. Competition for the Monteux-Victor LM 1197. A choice between the two is difficult since both are expert interpretations. Victor's recording is slightly warmer, and diffused—advantageous to this impressionistic music. AA A

The Serious Gershwin. Morton Gould (piano) and His Orchestra. 4 sides, RCA Victor LM 6033. $3.98. "Rhapsody in Blue," "An American in Paris," "Porgy and Bess Suite" arranged by Gould, "Concerto in F," "Preludes." The playing of the orchestra and the interpretation outshine the piano playing of Gould. . . .More fluid piano playing of the "Rhapsody in Blue" and the "Concerto" may be heard on the new MGM E 3237 with Sondra Bianco. But neither the playing of the orchestra, the interpretation, nor the fidelity match Columbia. Ideal would be Bianco playing under Gould. A AA

Grieg: *Peer Gynt*—Suites Nos. 1 and 2 & **Bizet:** *L'Arlesienne*—Suites Nos. 1 and 2. Philadelphia Orchestra under Ormandy. Columbia ML 5035. $4.98. Very likely the most popular serious music ever composed to fortify stage plays. Beautifully performed but a bit harshly recorded. . .the *L'Arlesienne* Suites take up the whole of the new Westminster W-LAB 7006 ($7.50) in which Rodzinski conducts the Philharmonic Symphony of London. More detail emerges than in the Columbia disk, partly due to the close-in, wide-range recording, but Columbia has more vitality. AA A

Lumbye: *Dances from Tivoli.* Tivoli Concert Hall Orchestra under Tippe Lumbye. Mercury MG 9000. $3.98. Seven dances written around a century ago for performance in Copenhagen's famous amusement park, Tivoli. . . .waltzes, polkas, galops. There's a delicate, charming, unsophisticated quality here that clearly distinguishes these pieces from those of Johann Strauss, though they are related. Tastefully performed and fairly well recorded. AA A

Mendelssohn: *Symphony No. 3.* ABC Sydney Symphony Orchestra under Goossens. RCA Victor LBC 1089. $2.98. If anyone wants the "Scotch" symphony alone, this is a good buy, for the performance is excellent and the recording just a little short of the best. AA A

Mozart: *Concertos for Violin,* Nos. 2 and 5. Grumiaux with the Vienna Symphony Orchestra under Paumgartner. Epic LC 3157. $4.98. While No. 5 is the more frequently heard piece, it is a good coupling. Grumiaux plays with taste and excellent musicianship and he has ample technique. Rather well recorded. AA A

Puccini: *Madame Butterfly.* Canali, de los Angeles, Gobbi, Ercolani, etc., under Gavazzeni. 6 sides, RCA Victor LM 612. $11.94. The orchestra is recorded as from a distance in an empty hall but the singers are really too close to the mike. The cast is adequate, with de los Angeles standing out for beautiful, though not for particularly dramatic singing. London LLA 8 offers Tebaldi and Victor LCT 6006 offers the girlish-sounding Del Monte and the robust Gigli but less fidelity. No set clearly tops the others. A A

Schoenberg: *Pierrot Lunaire.* Alice Howland (speaker) with Chamber Group under Winograd. MGM E 3202. $3.98. Twenty-one pieces sung/spoken in a fascinating manner. Composed in 1912, time and repeated hearing may have softened the blow, but many still wonder why this is called music. Miss Howland is sincere and fairly good, but I have heard better. A A

Tchaikovsky: *Album for the Young* & **Mendelssohn:** *Six Children's Pieces.* Pressler (piano). MGM E 3204. $3.98. Twenty-four brief, relaxing, delicate, imaginative pieces by Tchaikovsky and six by Mendelssohn, all written for students, but worthy of much wider hearing. Tenderly played and well recorded. AA AA

Tchaikovsky: *Symphony No. 5.* Pittsburgh Symphony Orchestra under Steinberg. Capitol P 8325. $4.98. The 20th LP of this masterpiece, according to Schwann's catalog. The recording sounds dry, muffled, distant, particularly when compared with the luscious sounding Philadelphians on Columbia ML 4400. With the exception of the third movement which lets me down, the work is rather well performed. I'd rate ahead of it, however, the aforementioned Columbia; Dorati on Mercury 50008; van Kempen on Epic 3LC 3013. A A

Tchaikovsky: *Symphony No. 6.* Boston Symphony Orchestra under Monteux. RCA Victor LM 1901. $3.98. The Bostonians play Tchaikovsky's morbid masterpiece with more delicacy and nuance than you'll hear in most of the other 20 recordings listed. The engineers deserve high praise. It brings to three the recordings which I think stand above the others. Add to the Monteux, the Ormandy-Columbia 4 ML 4544 which is played more broadly and vigorously, and the Kubelik-Mercury MG 50006. AA AA

Folk Songs of the New World. Roger Wagner Chorale Capitol P 8324. $4.98. "Black is the Color," "Wayfaring Stranger," "Cindy," "Skip to Mah Lou," etc. The settings are simple and they are well sung and recorded. AA AA

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